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FRANK HERBERT PALMER, EDITOR

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EDUCATION

Devoted to the Science, Art, Philosophy and Literature of Education

VOL. XXXVII. MARCH, 1917 No. 7

A Teacher's Prayer

EMMA A. FERRIS, BROOKLYN, N. Y.

Create in me a clean heart that I may be able to stand in the pure presence of innocent children, oh, my children's Father.

I crave that principal thing,—see wisdom in my praise and censure.

My sensitive scarred child, my pampered insolent cripple, my ridiculed and ostracized foreigner, my sleepy "little mother", my buffoonish dullard, my bully, my over proud leader, and my just ordinary child (if such there be)—may it be my happy fortune to dazzle these with a golden shaft of approving smile! May my necessary censure be carried to them on wings of recognizable love. My children's Father, may Thy kingdom come into my classroom. Make it the A B C of heaven.

I thank thee for homely encouragement—my children's responsive and unaffected smiles, their sweet sounding and wrongly spelled love notes, the sympathetic tightening of their grimy little hands upon mine, their impetuous rush to "my teacher", their counting, countless, lovingly tendered favors, their Spartan struggle with, and glorious conquest of, protracted fits of temper, their well directed efforts, their successes. Teach me, my children's Father, to hear, and to heed, sermons in the flinty stone of their failures!

If, by my weedy Moral Thoughtlessness or Secular Negligence, I have crushed a Bleeding Heart, Master of my lovely garden, forgive me and implant the delicate flower called Careful Consideration and the more hardy one of Effectual Service in the gaping places of the uprooted weeds. And oh, Master Gardener, direct my careful nursing of the Bleeding Heart! Encircle my garden with the magic hedge called Patience. May no Unrighteous Anger o'erleap it.

And, my children's Father, will Thou stay the traffickers' hands that my children may come and go in safety. Amen.

The Normal School and Rural Education in California

J. B. Sears, Assistant Professor of Education
Stanford University, California.

A Study of the Social Composition, the Equipment and General Attitude of the Normal School Graduate toward the Rural School.

THE professionally trained teachers in the rural schools of California are furnished very largely by the state normal schools. Since approximately half of the state's rural teachers have had some professional training,* any light thrown upon the social heredity and the professional equipment of our normal trained teachers will help to answer the question, who is the rural teacher?

It should be said at the outset that a very large proportion of the graduates from the normal schools are sent to the country to do their first teaching. Just who these students are, and what they think of the prospect that awaits them when their preparation for teaching has been completed, should help us to a clearer understanding of some of the facts essential to the development of a comprehensive educational program outside the city.

To this end the following list of questions was placed in the hands of nearly one-third of the members of the senior slasses in four of the state normals, who filled them out under careful supervision.†

1. Your nativity?.....2. Sex?.....3. Age?
4. Nativity of your father?.....5. Of your mother?
.....6. Your father's occupation?.....
7. Is your home in the city, or country, or town?.....

* See article by Miss Elliott and the present writer, "A Study of the Rural Teaching Class of California." American School Board Jr. Oct., 1914.

† For this supervision thanks are due Professors Phelps, Root, Wilson, and Stebbins, of the Fresno, Los Angeles, San Jose, and Chico Normals, respectively.

8. Have you ever lived in the country?.....9. How long?
.....10. In the city?.....11. How long?.....
12. In a town?.....13. How long?.....14. Total number of children in your family?.....15. How many of them have ever taught?.....16. Did you receive your elementary school training in a town, or a city, or the country?.....
17. How long did you attend high school?.....18. Where? (town, or country, or city).....19. Could you have gone to college instead of to normal school if you had preferred?.....
20. Why did you wish to come to the normal?.....
.....21. Do you expect to go to college or university later on?.....22. Do you expect to teach?.....23. If you could choose, where would you teach your first school, in the city, in a town, or in the country?.....24. Why?.....
.....
25. Where do you expect that you will likely have to teach the first year: country, town or city?.....26. If you should teach in the country the first year will you try later to get a school in a town or city?.....27. Why?.....
.....
28. How many besides yourself will be dependent upon your salary when you get to teaching (a) in part.....(b) in full?.....29. What are you going to work hardest to accomplish when you get to teaching?.....
.....
.....
.....
.....
.....
.....

It is probable that nearly every one of these 387 students are entering the teaching profession this fall, and most of them by way of rural schools. The type of training, the social inheritance, and, to some extent, the general point of view which this group of novices will soon bring to bear upon their work, and which is helping to determine the kind of training the rural children of the state will receive this year, is indicated with some clearness in the following tabulations.

The number of students graduated by these four normal schools for the year was approximately 1300. The number selected for this study, 387, represents therefore nearly 30 per cent. of the total number of teachers supplied by these four training schools last year.

Nativity, Sex, and Age.

The population of California is 24.7 per cent foreign born. For Los Angeles the per cent foreign is 21.0, and for San Jose it is 21.1. Table 1 reflects this somewhat, for though the number of foreign students among these graduates is small, 2.6 per cent,

	Teachers	Fathers	Mothers
Native Born	97.4	77.9	80.3
Foreign Born	2.6	22.1	19.7

TABLE I—Showing nativity of teachers and of their parents in per cents.

yet it must be remembered that the greater number of our foreign population are adults, past the age for going to school when they arrive. That they do enter into this phase of American life, however, is shown by the fact that 19.7 per cent of the mothers and 22.1 per cent of the fathers of these students are foreign born. Which means that over one-fifth of our normal trained teachers are of foreign or mixed parentage. It should be added that 54 per cent of the foreign born fathers, and 38 per cent of the foreign born mothers are Canadians, English, Irish or Scotch, while less than 3 per cent in each case are of Asiatic or South European stock. The customs, ideals and traditions of most of the foreign element are therefore much like our own. This reduces the question of race to insignificance, till one recalls that the number of our rural teachers who are foreign born or of foreign parents is very much larger than this would indicate.* This seems to suggest that it is the foreign element among the rural teachers which has not had professional training. The study cited above, however, does not show this to be true, though it does show that as many of them went to college as to the normal school, and that their average attendance at normal school was but a fraction over 1 year.

When it comes to the question of sex we see how faintly the

* Ibid. The figure shown by the study cited above is over 43%.

rural school—or shall we say the normal school—calls to young men. Is rural teaching economically beneath the men? The state can ill afford to have it so. At any rate but 4 per cent of this group are men, which is a strong contrast with the situation in the best normal schools of the middle west, where the salaries of rural teachers are much lower than they are in California.

The normal age for graduation from the normal school is 20 years, assuming that the student enters school at the age of six. Table 2 shows the distribution of the group on the basis of age and

	18	19	20	21	22	23	24	25	26	27	28	29	30	Over 30	Ave.	Med.	2.
Native	24	48	70	54	27	14	3	6	4	1	4	0	3	5	20.5	20	2.
Foreign	8	21	30	21	13	9	3	1	3					4	21.2	20	1.5
Total	32	69	100	75	40	23	6	7	7	1	4	0	3	9	20.9	20	1.

TABLE II—Showing distribution on basis of age and nativity. Foreign includes all foreign born or of foreign or mixed parentage.

nativity. "Native" in the table includes native born of native parents, and "foreign" includes all others. It will be seen that the average age of the group is nearly one year above normal. The deviation from the central tendency as indicated by the quartile is 1.5 years. The extremes are 18 and 42 years respectively, while 175 are above the normal age, but 101 are below it. The foreign group are graduating at a slightly lower average age than are the natives.

It is needless to suggest that too large a percentage of these teachers are getting into the profession at a rather late age, over 12 per cent being 25 years of age or above. Since the legal age for certification in the state is 18 this may explain why there are not a few 17 year old graduates.

The Occupations and Types of Life with which the group is familiar.

The social inheritance of a teacher is an important part of her equipment. The occupations she is familiar with, the types of social and community life, and the institutions with which she has come in contact, all play a part in rounding out her general outlook upon life. The broader and richer these many contacts with the world have been, the more ideas she will be able to bring to bear upon her interpretation of books and of childrens' needs.

This experience should include as its center, as full a knowledge of and sympathy for country life as is possible if she is to be a rural teacher. To have lived solely in the country, however, is but little better than to have lived solely anywhere else.

It has often been said that our rural teachers are city girls with no knowledge of or sympathy for country life. The study above referred to seems to contradict that statement so far as California is concerned, since 72 per cent of the group of rural teachers there studied, had lived five or more years in the country, and over 40 per cent were from the homes of farmers.

Of the 362 normal graduates reporting this item here however, there is a different story, since the present homes of but 19 per cent of them are on the farm. The present homes of 50 per cent of them are in the city, while 31 per cent live in small towns. If it were true that none of these homes had ever been moved, then we should agree that the state is not selecting the best equipped class of people for its rural teachers. But further examination shows that 242, or 63 per cent of them have at some time lived in the country, and that only about one-fourth of these had lived there three years or less. That is, nearly one-half of the entire group have spent more than three years in the country, and of these but 16, or 4.4 per cent, had lived only in the country. It appears also that but 18, or 5.3 per cent, had lived in a small town only; and that 55, or 15 per cent, had lived in a city only. In other words, slightly more than one-third of these beginning teachers have spent all their lives to date in one type of community, as rural, village, or city. Within the limits of that one, however, they may have moved about a great deal, thereby coming into contact with a wide variety of social customs and traditions. Not to mention such moving about as this, however, the mobility of the group from which the state is selecting people to train for its rural teachers, is still great, when it exceeds 60 per cent. In a comparatively new country, however, this means a shifting, but by no means a shiftless population. In most cases it doubtless means a richer social inheritance for the teacher than would have been obtained from life in one single type of environment.

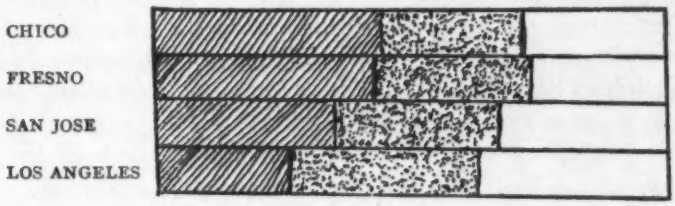

CHART I. showing distribution of time spent by the respective classes in Country, City, and Town.

The accompanying chart shows the per cent of the total time of each of the classes which has been lived in country, city, and small town, respectively. Taken as a whole it does not appear that too many city ideas will enter the rural schools from this source. The full facts are more clearly shown in Table 3, which gives separately and in detail the types of community life to which the four groups

	In Country			In City			In Town		
	3 years or less	Over 3 years	Not at all	3 years or less	Over 3 years	Not at all	3 years or less	Over 3 years	Not at all
Chico Normal	4	15	5	4	13	5	2	11	10
Fresno Normal	17	47	14	16	45	17	19	30	29
San Jose Normal	3	22	20	15	22	10	4	21	21
Los Angeles Normal	9	95	103	55	147	16	33	124	34
Total	68	179	142	90	227	48	58	186	94

TABLE III—Showing by schools the number of students and the amount of time spent in each of the three types of communities. (81 of the 142 who had never lived in the country had lived in towns.)

of students have been exposed, and the extent of each. The schools are presented in order of the size of the cities in which they are located, and it will be seen that the larger the city in which the school is located, the more distinctly urban are its students. Referring to the total line in this table, it appears that but 179, or a little less than 50 per cent have spent over three years in the country. Add to this, however, 17 per cent more who have spent three years or less in the country, and then considering the more or less rural features of life in towns and villages, one cannot fail to see that, while a large proportion of these students know city life, yet the per cent not having some knowledge of the country or small town is still not surprisingly high, even if nearly 40 per cent have never lived in the country, strictly

speaking. Though the table does not show it, 81, (or 57 per cent) of these 40 per cent have lived in a small town. The interesting evidence in these figures is the amount of moving about which these students have done. As suggested above, this probably represents an asset to the profession.

The occupations with which these teachers have been brought into contact are extremely diverse, some seventy different occupations being mentioned. Table 4 has grouped these according to the customary classifications.

	Business	Professional	Artisan	Laborer	Public Officials	Retired, Dead, etc.	Agriculture
Chico	7	2	1	0	0	1	12
Fresno	20	5	5	6	3	8	28
San Jose	10	1	4	3	3	5	14
Los Angeles	68	32	30	8	9	19	58
Total	105	40	40	17	15	33	112

TABLE IV—Showing the distribution of the four groups with respect to their parents' occupations.

The fact that only 19 per cent of these students live in the country, but that 30.9 per cent of their parents are farmers, shows that through occupations they have more rural contacts than they have through residence. The facts so far presented seem to show that our normal trained rural teachers are not being drawn from any one class, either with respect to occupation, or with respect to residence; but that, on the contrary, they are, in these particulars, entirely representative of American society in general.

Size of Families from which the Group is Drawn and their Tendency to Enter the Teaching Profession.

The number of the children in the families represented by these students varies from 1 to 14. In 28 cases the student reporting is the only child, and in one case the student reporting had thirteen brothers and sisters. The range in size of families is therefore practically as large as if many thousands of families had been represented. As may be seen in table No. 5, there are more of them from families of three children, than from families

No of Children in the Family.																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	Ave.	Med.	Quart.
28	70	83	56	44	34	30	7	3	5	2	5	2	1	4.13	4	3

TABLE V—Showing size of families to which these students belong.

of any other size. The median family represented has 4 children,

and the average 4.13. The variability in size can be seen by the table, and is fairly represented by the quartile, which is 3.

The extent to which teaching is known by these students is shown in table No. 6, from which it appears that in 16 of the families having 2 children, one had taught; from 19 families of

Number Children in the Family	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Number Families in Which One Child had Taught		16	19	14	14	8	5	4	3		1	1		
" " " " Two Children " "			5	5	5	1	4	1						
" " " " Three or More Children had Taught			3	2	6					1		1	1	

TABLE VI—Showing the number of different sized families having one, two, and three or more children teaching.

3 children, one had taught; from 5 families of 3 children, two from each family had taught, etc.

In all, 127, or over 34 per cent of the families represented here, have from one to five children already teaching, or, 127 of the 366 students answering this question, had one or more brothers or sisters who were teachers.

Referring to table 4, "Professional" column, one would estimate that probably not more than 10 of the 40 parents listed there as professional, were teachers, so not much of a stimulus for these students to enter teaching could have come from that source. But that these students are from families where teaching is a favorite occupation, there can be no doubt, when we add that approximately one-third of all the sons and daughters of the parents of the group of students here studied, have been teaching or will be teaching this fall.

Considering the number and variety of occupations to which these young people have been exposed, one is inclined to ask why so large a percentage are entering teaching. There is no way of knowing from the data of this study, but certainly we doubt, whether any other one calling receives so large a following from this group of families.* Surely here, teaching runs in families. Of course this does not mean that they all remain in the teaching profession, but it does mean that they enter it. Since our teachers are very largely women, it is fair to suppose that the sons of these families make up only a very small proportion of those teaching.

* It would be interesting to make a similar study of a number of occupations, to see the extent to which all the children in a family tend to follow the same calling.

The Types of Schools in which the Group has been Trained, and the Extent of their High School Training.

Tradition is a large factor in the training of teachers, as it is for all other callings. Probably one of the large tasks of the normal school is to help the students to unlearn many of the things they learned about teaching while they were still pupils in school with a child's viewpoint, and to rationalize for them the practices which they would otherwise follow by force of custom and tradition. While the beginning teacher needs to be safeguarded against these tendencies, yet such experience and knowledge cannot be ignored as unimportant in a teacher's equipment.

The girl taught under the complex organization and management of a school of a thousand children can have but a slender notion of the simple procedure essential to the work of a one room country school. By table 7 it will be seen that those who had all their elementary training in the rural school, plus those who had some part of it there, make up but little more than a fourth of

Per cent. of Group who had	Elementary School	High School
All their Training in a Country School	17.7	1.8
" " " " " Town "	28.9	44.9
" " " " " City "	35.5	50.0
Part of their Training in a Country School	11.4	.8
All " " " " " City or Town School	6.5	2.5

TABLE VII—Showing relative proportion of previous school experience in country, town and city respectively.

the group; and with respect to high school training, they are practically all town or city trained. It could hardly be otherwise in respect to the latter, when there are so few rural high schools. We must say then, in respect to their own school experience, city ways largely predominate. That this will tell on the methods and management of the rural schools they enter is inevitable, but it is fair to raise the question as to whether this is worse for the rural schools than an equal amount of influence brought from some poorly equipped and poorly taught rural school. We have commonly deplored the above fact without considering what must be expected from the opposite source.

The amount of high school training varies from the regular four years in only 67 cases, 39 of which spent less, and 28 of which spent more, than four years in the secondary school.

Did They Definitely Enter Upon a Professional Career When They Started to the Normal School?

In answer to the question, why did you go to the normal school, most replied that they wished to prepare for teaching, and almost every one states that she expects to teach. Yet in these replies there are many evidences, somtimes frank statements, that the real motive was other than a desire for professional training. Many went to normal because they could be at home while attending. This doubtless offers one good reason for the group being largely urban. Many graduated from the city high school and would probably have gone no further, but the normal, only a few blocks away, with inviting social environment, and with little expense, was a natural step for the city girl. For the country girl, this move was both more difficult and more expensive.

Some said they wished to teach, and the normal offered the quickest preparation. Behind this and many similar replies, the real motive is a desire to earn money as soon as possible. Further facts bearing on this matter appear in table 8, which shows that 165, or over 44 per cent, of the group could have gone to college instead of to normal had they so desired; and that 191, or over 51 per cent, could not have gone; 6 were in doubt, and 7 had been

	Could have gone to College	Could not have gone to College	In doubt	Have been to College	Total
Will go to College later	90	112	3	4	209
Will not go to College later	63	62	0	2	127
May or may not go to College later	12	17	3	1	33
Total	165	191	6	7	369

TABLE VIII—Showing correlation between those who could or could not have gone to College and those who will or will not go later on.

to college. The table also shows that 209, or over 56 per cent, intend to go to college later; 127, or over 34 per cent, do not intend to go; while 33 are in doubt as to whether they will go or not.

If 44 per cent chose to go to the normal rather than to college, it may not be too liberal in most cases to say that they knew why they were going to normal. It is noticeable that only a little over half of these (54 per cent) intend to go to college later on. Of those who could not have gone to college instead of to the normal, slightly more (58 per cent) intend to go later on. So the intellectual ambition of the two groups (those who could have gone to college, and those who could not have gone) is about the same.

It appears that little less than half of these students are going to be satisfied with a normal school training. This is probably the group who will marry, or for other reasons quit teaching in a year or two, while the group who plan to go to college later intend to stick to the profession, and to grow in it. It is interesting to add, that of the 209 who expect to go to college later, 164, nearly 80 per cent, say that even if they do teach their first year in the country, they hope to get positions in the city later on. Contrast with this the corresponding facts about those who do not intend to go to college later. There are 125 of these, and but 41 of them (less than 32 per cent) say they hope to get a position in the city after having taught a year in the country.

Knowing as we do, that, at present, to grow in the profession necessarily means to look toward the city positions, it is fair to assume that these 125, or nearly one-third of the entire group are not very ambitious professionally. They went to the normal as a finishing school, or as a means of earning a little pin money, or for other reasons which, from the point of view of the state, scarcely warrant the expenditure for their two years of training. The service they render to the state by teaching one or two years may be excellent, but the motive which prompts them to enter teaching is not a satisfactory guarantee of this to the state.

By this I do not mean that the normal school should never be used as a finishing school. Our future mothers could hardly receive a better gift from the state, nor could the state make much better investment for its own future than in this way, but why make the abuse of the teaching profession an incident in every good work of this kind? Let these 125 have their training, and diploma, but not a certificate to teach, unless they show professional qualifications. It is the state's business to dignify teaching as well as to be willing to pay for teaching which is dignified.

Further evidence of professional enthusiasm is seen in the answers to the last question, "What are you going to strive hardest to accomplish when you get to teaching?" These replies could not well be tabulated, but in general the idea of social service in the community is prominent, though not to the exclusion of the idea that they are to train individual children. Many wish to specialize in music, domestic science, domestic art, drawing, etc.,

or in a given grade, or merely to become a successful teacher. Many of these replies show that the idea of *what is to be achieved in teaching* is quite well defined. Which may be taken as some evidence that they have received real professional training.

Their Attitude Toward the Rural School.

Many say they would like to teach their first school in the country, but many more, as table 9 shows, expect to have to begin there. As suggested above, a large proportion of these students expect to spend only a short time in the rural school. 92.6 per

	In the City	In a Town	In the Country	In the Town or Country
Wish to Teach their First School	72	113	167	8
Expect to have to Begin Teaching	32	99	189	19

TABLE IX—Showing the number who wish to begin their teaching in the City, Town and Country schools respectively and those who believe they will have to teach in one or another of these.

cent (leaving out those who are in doubt about their future teaching) say they will try to get some experience in the country and then go to the town or city. One is left wondering why the other 7.4 per cent want to remain in the country.

In answer to the question why they wish to teach in the city, one reads constantly: easier work, better pay, better social opportunities, opportunity to specialize in one grade, better intellectual outlook, schools better equipped, and one says: "To strike for higher salaries."

With so many advantages in favor of the city schools, and with better pay, it is no wonder that teachers strive to locate in the city. The fact that the city schools are so attractive, makes it possible for them to demand experience as a qualification for teaching. To get which, there is but one way, viz., go to the country school. And that is what happens. The rural school can never have a permanent staff under such conditions. The state must make the rural positions desirable, by a sensible scheme of rural school organization and administration, and then it will not be a stepping stone to "better work and better pay." This, however, will not come about so long as the whole matter is left to local initiative.

Financial Handicap under which these Teachers will Work.

In the study above referred to, it was found that 63 per cent of the teachers studied* were using parts of their salaries to support or help support others besides themselves. Here is a group of 387 graduates who expect to teach in the autumn following graduation, and more than one-third say in advance that they are expecting to meet similar obligations. The figures show that 39.8 per cent of those whose homes are in the city, 35.3 per cent of those whose homes are in towns, 34.2 per cent of those whose homes are in the country, making 37.3 per cent of the entire group, excepting the few who answered with a question mark or not all, are to start their professional careers with this handicap, in greater or less degree.

Further analysis shows that only 23.2 per cent of those whose parents are farmers are included in this group (see table No. 4 above), which seems to indicate that the sons and daughters of farmers are starting with less than the average financial handicap.

There is another way to look at these facts, which is, to regard this financial responsibility as a motive for entering upon a teaching career. Then one asks: does it take less financial pressure to drive a farmer's daughter into teaching than it does for the daughter of a city dweller. That is true of this group.

Summary and Conclusions.

The study deals with nearly one-third of the 1914 graduates from the four principal normal schools of the state of California, and aims to analyze their social composition, their professional equipment, the motives which lead them to enter the profession, and their attitude toward teaching in general, and toward the rural school in particular, in order to find out what we can about the actual work that is being done by the normal school, and the bearing of this work on the problem of rural education.

There are very few foreign students, but almost one-fourth of the group are of foreign or mixed parentage, which, considering the mixed character of the state's population, is not too high. This is one means by which foreign ideas and traditions are filtering

* One hundred twenty-five teachers selected at random from 50 of the 58 counties in the state.

into our American life. It is a very direct method, not of Americanizing our foreigners, but of preventing a process of inbreeding which might tend to make the American character less composit and cosmopolitan than it should be in a nation made up of many races.

Just what goes in through this avenue, however, is a just concern. The figures show that over half of this influence is from peoples closely allied to us by blood, and that but a very small proportion comes from an Oriental or South European source.

Only four per cent of the group are men. It does not appear from so narrow a study why the normal schools do not train more men than they do. It is true that they train teachers for the elementary schools only, but the proportion of men teachers in the elementary schools of the state is more than double the per cent of men graduates in our normals. It does not appear to be the rule for men to train definitely for elementary school positions, but rather to drift into them, or to enter from the high school by way of county teachers' examinations.* At any rate, the state's normal schools were not built exclusively as ladies' seminaries, and their excellent equipment and teaching forces should be brought to bear upon the training of men as well as women.

The average age of the group is one year higher than it should be, or taking an age-grade distribution of the group we would say that the average member is retarded one year. The median member, however, is exactly normal (the average age is brought up by a few) which shows that the group is properly distributed with respect to their abilities to get along in our educational system.

Less than one fifth of them are now living on the farm, while half of them live in cities and the others in small towns. Half of the group have at some time spent at least three years in the country, while only a very few have lived only in the country. Nearly two-thirds of them have lived in more than one of these types of communities. That is, they are drawn from a very mobile population, which, as a part of their social heredity, is believed to be an asset in this, a more or less frontier state.

From the standpoint of occupations they represent a wealth of experience. Their fathers alone, not to mention older brothers

* Nearly 600 elementary school certificates were issued by county boards during the year, on the basis of examination.

and sisters, represent at least seventy different callings, with agriculture standing at the top, and various lines of business second. Yet either from the standpoint of present residence, or from that of occupation, the group is much more urban than rural, despite the fact that more than half of them have lived in the country for a few years at some time in their lives.

The size of families from which the group is drawn ranges from one to fourteen children, though the families do not average larger than for the state as a whole.

A surprisingly large percentage of the children from the families represented have entered teaching. When these students begin work this fall, practically one-third of all the children from the families included in the study will be, or will have been teaching.

About three-fourths of the group had all their elementary schooling in town or city, and nearly all had their high school training there, which latter varied only slightly from the regular four years.

Over 40 per cent of the group say they could have gone to college, but chose to go to the normal school instead. With slightly over half of them, it was either go to the normal or nowhere. This by no means implies that they would have chosen to go to college if opportunity had permitted. It is interesting to note that more than half of the group intend to go to college later while nearly half are content with the training they have.

Most of the students went to the normal to prepare to teach, but it is evident that many would not have gone had it not been very convenient. Many wished to teach in order to earn money to help support others than themselves; others to earn pin money, etc.; but a goodly number are professionally ambitious.

They practically all regard the country school as a mere training place, in which they have no great interest, and from which they expect to flee at first opportunity. They seem to think that fate decrees that they shall stay awhile in the country, but there is clearly no evidence to show that even in their training it has ever been suggested to them that rural education is a legitimate, professional field, for which definite training is necessary. This is not saying that the normals have neglected to train for rural

positions, nor that they have not urged the claims of rural life and the rural school. But it does show, that in the achievement of these things they have failed utterly. It is probably assuming too much to suppose that the state's normal schools can, alone, develop rural teaching into a profession. The state must see to it that any effort put forth by the normal in this direction should not be lost. Not only does the country school not attract, but these students can explain clearly why it does not.

So we can say that there is nothing here to show that the normal schools have changed the attitude of teachers toward the rural school from what we have generally considered it to be for decades past. This suggests that if the normals are doing what we give them credit for doing in rural education, then the state must supplement this agency very materially. The rural school as it is does not appeal as strongly as does the city school, and the reasons are in part outside the province of the school to control, and in part inside. The rural school as an institution has been constructed for the purpose of bettering rural life conditions, which it cannot control directly. It cannot do this until it increases the efficiency of its own equipment and teaching force, which can never be done so long as it remains the little isolated, lonely thing we now know. Its weakness does not command the respect of the people whom it serves. The size of its task must be enlarged, and its organization and equipment accordingly modified, then the rural school will command the attention of ambitious, well-trained teachers. The normal schools over the country are seeing this problem more clearly than their product would indicate, if this group of students is a fair sample. But the ideal rural life and rural school which they hold up before their students does not exist, and but few beginning teachers feel called upon to sacrifice known opportunity in the city for unknown opportunity in the country. It is very well to emulate service in the presence of young teachers, but it is folly for the state to try to maintain a strong institution on a sentimental basis.

The solution is first of all, consolidation, to put an end to the district system, a solution which has been pointed out ever since the time of Horace Mann. Present day literature abounds in clear, philosophical statements of the problem, and adequate ex-

planation of practical plans. But the rural school still awaits the passing of politics, and the rise of constructive statesmen. Our school machinery has been made up in a piece-meal fashion, and though the separate pieces, as the normal school, may be excellent, they can not function to the best advantage till their relationships to other pieces are clearly worked out. So the above facts do not reveal the defects of our normal schools so much as they show their handicaps, and like the facts of other investigations of this kind, they point to a weak and archaic rural school machinery.

My Kingdom

A King am I by right divine;
A ruler, counselor, and lord.
No barriers my realms confine;
My subjects heed my every word.

I straighten all their quarrels out,
All knotty questions I expound.
My armies ne'er are put to rout,
For in my realms no arms are found.

A reign of peace and love and trust—
What mortal king could ask for more?
For those o'er whom I rule are just
A lad of six, a lass of four.

HERBERT H. PALMER.

Chemistry in its Relations to Industry and Commerce

Mary E. McKean, Elyria, Ohio.

Continued from Education *for February.*

III

SOAP MANUFACTURE.

1. Soap is produced, in a general way, by the action of soda, potash, and other chemicals upon oils and fats. Its manufacture comprises an important chemical industry.

(a). Value of Production:—In the United States the manufacture of soap amounts to more than one hundred million dollars yearly, or somewhat over a dollar per capita. There is a large international commerce in soap, but a larger trade in its raw materials.

(b). Oils and Fats:—Tallow, olive oil, cotton seed oil, oil of sesame, peanut oil, cocoanut oil, and other oils and many fatty substances of animal and vegetable origin, even including the grease from sheep's wool called lanolin, are used and form the basis of soap production and a large commercial trade.

(c). Status of the Soap Industry:—The great slaughtering industry makes its refuse grease into soap material. The utilization and conservation of former waste matter into by-products have given great impetus to the manufacture of soap by establishments that began as slaughterers of meat and animals.

(d). Distribution of Soap Production:—The soda ash of factories of New York and Michigan produce the materials required other than fats, and soap manufactories are distributed throughout the manufacturing parts of the United States, from Chicago to Boston. Philadelphia, Cincinnati and Chicago lead in the industry.

2. Soap, because of its importance considered as a chemical production, may be further defined as a substance consisting chiefly of the alkali—metal salts of the acids contained in fats.

(a). Method of Manufacture:—Fats mixed with a solution of caustic soda or of caustic potash heated to boiling temperature, at which the mass saponifies, produce the substance we call soap.

(b). Kinds of Soap:—All soaps may be grouped in two great classes, potassium, or "soft" soap, and sodium, or "hard" soap. Potassium soap is mostly yellow in color, sometimes tinted green and put upon the market as original "green soap." Sodium soap is formed by the separation or "salting out" of the reaction mixture after saponification by the addition of common salt to the substance at boiling temperature.

(c). Explanation of Cleansing Process:—When an alkali metal salt of the higher fatty acids comes in contact with a large quantity of water it decomposes, forming free alkali. Each molecule of acid thus liberated unites with a molecule of the salt to form an insoluble substance which with water produces lather, this coming in contact with dirty or soiled surfaces, since dirt and soil are largely of a fatty nature, dissolves with the fat either by the free alkali or acid through saponification; or it is carried off in an emulsion by that part of the soap which remains suspended in the form of minute particles of matter.

IV.

EXPLOSIVES.

Explosives have long been regarded as the most spectacular products of the chemist's laboratory. An explosive may be defined as a substance, or mixture of substances, which may be caused to decompose with great violence.

(a). Uses—First used in war for destruction only. In recent years explosives have entered the domain of industry and are performing a valuable and ever increasing service, especially since the manufacture of dynamite has become cheap.

(b). Amount of production:— Our per capita production amounts to about ten pounds per year. In 1912 we shipped 15 million pounds of dynamite to Panama alone for use in the canal construction. The traffic in explosives is so great that over 3 thousand cars upon United States railways are constantly engaged in transporting them.

(c). Location of Plants:— It is of distinct advantage to locate the plants on tide water, so the banks of the Delaware river have long been chosen for the location of factories engaged in making explosives, with the center at Wilmington, Delaware.

I. Gun Cotton.

One of the most delicate and finely adjusted products used in the manufacture of high explosives is gun cotton, whose method of production was discovered by Schönbein in 1846. Cellulose cotton is soaked in a solution of nitric and sulphuric acids, in the proportion by weight of one part of nitric to three of sulphuric for 24 hours. The sulphuric acid evaporates all moisture and is the chief agent in the resultant chemical change that produces the material known as gun cotton. The material then must be thoroughly soaked in water, sometimes for weeks to destroy all traces of the sulphuric acid. When the litmus paper used in testing for traces of the acid does not turn red then the gun cotton is removed from the water, rolled into blocks by pressure and is then ready for the market as a commercial product.

Much use is made of gun cotton in mining and torpedo making. Sir Frederick Abel of England improved and reconstructed the process discovered by Schönbein simplifying the production and improving its commercial value.

V.

LEATHER.

(a). Chemical Tanning:— The stringent situation caused by the shortage of wood for tanning purposes has been fortunately relieved by the discovery of a new tanning process practically independent of wood material since it is developed from chemical compounds of chromium.

(b). History:— It is known as the chrome process; and was first applied in Philadelphia, by Augustus Schultz. Its use has grown rapidly and helped to make that city one of the great leather manufacturing centers of the world.

(c). Location:— The chrome leather industry, depending as

it does on factory products, labor, and markets, tends to locate in manufacturing centers rather than, as formerly, in forest districts. It depends almost entirely upon imported skins, especially goat skins, for its raw material, therefore there is some advantage in being located near the ports of entry.

(d). Value:—The United States makes more than 500 million dollars' worth of leather per year. More than 100,000 people are employed in its output.

VI.

RUBBER.

1. A milky liquid that coagulates on exposure to air, obtained from different varieties of tropic trees produces the chemically complex substance known as rubber.

Europe's attention was first called to the production of rubber in 1736. Its only use for more than a century was as the eraser, hence its name of "rubber."

(a). New Uses:— In 1823 a Scotchman named MacIntosh used rubber to waterproof cloth, that still bears his name. But when exposed to heat the gum used in the waterproofing grew sticky, and when exposed to cold it grew brittle and broke. In 1842 Goodyear, an American, discovered the process of vulcanizing, or mixing rubber with sulphur to remedy these faults, This process gave to the rubber qualities suitable for waterproof clothing, shoes and boots. The use of a large percentage of sulphur makes the hard rubber used for combs and a great variety of electrical and industrial articles.

(b). In recent years the process of making a satisfactory grade of white and red rubber has been a subject of many interesting experiments in the chemical laboratory. It is conceded that the use of Antimony sulphide, employed in the American process, does not give the best results, as the rubber treated by this method tends with use to harden and lose its elasticity and resiliency, whereas the German secret process renders the rubber permanently elastic and seemingly fortifies its resiliency.

(c). Supply:— The Brazilian product known as Para rubber leads the world in quality and quantity. Central America,

Africa, India, also grow the native rubber tree. A large amount of the rubber from Africa is obtained from a rubber climbing plant, or vine. The product from Asia is known as "India rubber." Rubber cultivation has become a great and growing industry within the last decade, and vast rubber plantations are replacing the wild native growth.

(d). Laboratory Rubber Supply:— In the near future we may find the rubber plantations competing with the product of the chemical engineer, who has elaborated a method of turning out cheap, synthetic rubber in European, American and Japanese factories. The United States Congressional Report of July, 1912, describes a process whereby vegetable starch, costing 2 cents per pound is converted by fermentation into fuset oil, this by chemical process into *isoprene* and lastly by the addition of mineral sodium into a good grade of rubber. It has not been made as yet in large commercial quantities, but it is claimed that by this process rubber may be made and put upon the market at sixty cents per pound, and possibly as low as twenty-five cents per pound.

(e). Value of Rubber Manufacture in United States:— Rubber boots and shoes, rubber auto tires, rubber hose, air-brakes' appliance, packing of pumps and valves, electrical supplies, etc., make a manufacturing industry in the United States that requires yearly nearly two pounds of rubber per capita, and makes this country the largest user and manufacturer of rubber in the world. Our export trade in made products amounts to more than 10 million dollars per year.

VII.

PETROLEUM.

1. Refining of Petroleum:— Crude petroleum is very complex in its nature and every year more and more commercial products are being separated from it by newly discovered chemical processes.

(a). Method of Refining:—The process of refining consists of distillation. The thick black oil is placed in tanks and heated; at different temperatures the elements one after another become volatilized and pass off like steam through pipes where they are

condensed by cooling. (1) The very volatile oils vaporize and pass off first.

(b). Uses:— These oils are used chiefly in dissolving rubber in rubber manufacturing. (2) Naphtha fumes pass off next, then gasoline. Uses— These products are utilized in gasoline engines of motorboats, automobiles, submarines and aeroplanes. (3) Kerosene, the great illuminating medium, passes off after gasoline and is the most important oil of petroleum. (4) The heavier oils come next and are used for fuel and lubricants. As lubricants they have a distinct advantage as they do not become so gummy or adhesive as other animal or vegetable oils.

(5). The thick black residue left after the withdrawal of the lubricants is of two types, one containing much paraffin, said to have a paraffine base, the other containing a high per cent of asphaltum, and hence is said to have an asphalt base.

Uses:— Further refining of the paraffine produces the substance used for paraffin candles, sealing-wax, and paraffine oil. The asphaltum by redistillation produces tar for roofing, and a residue of about 8 per cent of the whole amount of crude oil is left as hard as black coke. Each product here enumerated is capable of further separation into others by continued redistillation. At present the by-products of petroleum form a most interesting basis for chemical experiment, and the laboratory is producing new products every day. Vaselines, pomades, ointments and drugs are some of the substances thus produced.

VIII.

WOODPULP PAPER INDUSTRY.

The paper making industry has been largely changed in method of manufacture since the introduction of woodpulp paper and the consequent decline in rag paper production.

(a). Kinds of Woodpulp Paper:— There are two grades of woodpulp paper. The cheaper is simply ground wood pressed into a coarse, flimsy paper, used largely in printing newspapers, cheap magazines and books. The better and more expensive grade has the fibers softened and the quality improved by a newly dis-

covered chemical process. This is known commercially as "Sulphite," or "soda" pulp.

(b). Method of Production:— The chemicals used are placed in tanks that contain hundreds of tons of chips from which the chemicals, heated by steam, digest the cellular structure, leaving the fiberous parts which thus make a strong paper. The better grades of stationery, book, and magazine paper are made by the second method.

IX

ARTIFICIAL SILK.

1. A new chemical product attracting the interest and attention of manufacturers at the present time is the making of artificial silk. The silk worm makes silk by drawing fiberous threads from a glutinous mass in its head. This material is made from cells in the vegetable food of the worm changed by the chemistry of its body. Man has studied this function of assimilation and copied the worm's process. By chemical laboratory experiment, sawdust, or cotton waste, may be converted into a jelly-like substance resembling that from which the spider spins its web. By air pressure this cellulose is driven through very small perforations in glass. Each pin-like perforation makes filiments so small that, like silk, it takes ten to a dozen of them twisted together to make a thread.

(a). Origin of the Process:— The manufacture of artificial silk began in France in 1908 and has spread to Germany, Switzerland, England and America. The output was increasing with suggestive speed before the present European war.

(b). Amount Produced:— In 1909 the output was about 3 million pounds; in 1912 it was over 15 million pounds, about a fourth as great as the production of real silk. Our country alone used 1 million pounds in 1910 and imported twice that amount two years later.

(c). Price:— The price, which before the war was rapidly declining, was about $1.50 per pound against that of real silk at $2.90 per pound.

(d). Uses:— At first artificial silk was used for weft threads only, but later it was used for warp also. Its chief use to date is for edgings and trimmings which, because of its superior luster, proves very satisfactory for these purposes. It is worthy of note that this satisfactory artificial fiber is made at present almost entirely from refuse cotton, an abundant waste raw material.

2. Artificial laces and tulle of good quality have been successfully made by placing the cellulose from which artificial silk is made under pressure and then molding. See U. S. Con. Rep., July 17, 1911.

Much was expected from this new process of artificial silk production, as it apparently solved the problem of cheap silk for the masses, but the present unsettled condition in Europe has retarded and in some cases interrupted its production, therefore its future economic value and output is uncertain.

PART II

ELECTRO-INDUSTRIAL CHEMISTRY.

1. Definition:— By industrial electro-chemistry we mean the application of electricity to the production of chemical compounds for industrial purposes. The electric current is utilized in two ways: First, a direct current is passed through solutions, or molten baths, to effect decomposition into constituents which may be of important commercial value. Second, the current is used in electric furnaces for direct heating effects causing combinations of elements and compounds that could not be obtained in the ordinary furnace. The first type of operations is called electrolytic, and the second type electrothermal.

(a). Caustic Soda:— By far the most important of the first type of processes is the production of caustic soda from common salt; also the production of chlorine, hypoclorite, and chlorate by the electrolytic process.

(b). Pigments:— The manufacture of pigments by the utilization of the electric spark is attracting much attention at the present time, and many laboratory experiments are being tested

in the attempt to arrive at a satisfactory solution of many unsolved technical difficulties that beset the production of pigment matter.

(c). Ozone:—The process of changing the oxygen in the air to ozone is brought about by the passage of a current of air through a narrow space between two metallic conductors connected to the terminals of a high tention alternating current circuit that transforms the oxygen present to ozone by the silent electric discharge taking place through the current of air.

(d). Uses:— Ozone is now being used extensively as an agent for the sterilization of drinking water. It is also finding a large use in bleaching paper pulp, wax, oil, flax, etc.

(e). Calcium Carbide:— The most important example of the second type of process is the production of calcium carbide obtained from a mixture of lime and carbon fused at a high temperature, in the electric furnace. Use. Calcium Carbide combined with water produces the brilliant acetylene gas. Other commercial products of the electrothermal processes are carborundum, artificial graphite, and carbon bisulphide.

(f). Artificial Graphite:— The overheating of a carborundum furnace led to the chance discovery that decomposition of a carbide by excessive heat produces an artificial graphite that replaces the use of the natural product in many industrial plants.

(g). Alundum:— Another electric furnace product is alundum, or artificial emery, that has a daily increasing commercial value, and is largely replacing the use of the natural product.

(h). Carbon Bisulphide:— Practically all the carbon bisulphate used in modern industry is produced in the electric furnace. The chief constituents are sulphur and charcoal. The electric heat generated in the furnace warms the sulphur and charcoal causing sulphur vapors to rise through the hot charcoal and react when the zone of required temperature is reached. The carbon bisulphite fumes are passed out through pipes at the top of the furnace to suitable condensers.

(i). Carborundum:— Another product of the electric furnace made by fusing coke, glass, sand and sawdust in the consuming heat of the electric spark is carborundum. In its crystalline state it is called carbide of silicon. In trade it is often referred to as "black diamonds."

Uses:—When made usable by a cementing process it forms one of the finest abrasives known for the cutting of metal, stone, glass or wood.

Places of Production:— At Sault Ste Marie, Michigan, and at Niagara Falls are large power plants run by the agency of waterfalls where all the carborundum made in America is produced. In Norway and Sweden the moist Atlantic winds blowing against high mountains precipitate moisture that is utilized for the production of cheap electric currents. The currents seem to be the locating factor in carborundum manufacture so in those places many plants for the production of this material are located.

X.

STEEL MAKING.

1. The modern methods of steel production involve a distinct chemical process, as steel is merely a kind of iron which is hardened and toughened, according to requirements, by the admixture of definite amounts of alloys, mostly carbon in the form of manganese, and spiegel, and of substances other than carbon, whose use produce chrome steel, tungsten steel and vanadium steel. The exact grade of steel desired is obtained by use of chemical formulae.

(a). Processes:— There are three processes of steel making. (1). An old and excellent process, known as *cementation.* (2). The Bessemer process. (3). The open-hearth process.

(b). Copper Smelting:— The wide demand for copper in electrical work has caused enormous increase in the use of this metal in the last decade. The chemical process of smelting and extracting the metal has been much improved as is instanced by the recently acquired ability to now use large deposits of porphyry ores found in Nevada, Arizona and Utah, but which were of no value at all a few years ago before the discovery of new mechanical and chemical processes in copper production.

(c). Aluminum:— One of the elements of the earth's crust, existing in enormous quantities in common clay is aluminum.

For long the extraction of the element in its metallic form called *bauxite* baffled the attempts of chemists until the successful discovery of a simple process made by Charles Martin Hall in 1886 reduced the cost of production from ninety dollars a pound to eighteen cents per pound and inaugurated the wide use of aluminum ware. In consideration of the manifold uses of this newest of metals the present time is economically considered the "Aluminum age."

PART III.

MINOR CHEMICAL INDUSTRIES.

Essential oils, synthetic perfumes, flavoring extracts, gums and shellac are some of the substances whose production is grouped under the title of minor chemical industries.

The most important of these numerically is "essential oil," the name applied to oils that are characteristic of particular plants.

(a). Methods of Production:—

(1). Modern distillation, by pressure through the still.

(2). Steam distillation, steam passed through plants.

(3). Expressed oils, by squeezing.

(4). Macerated process, soaking plants and flowers in warm oil.

(5). Enfleurage process, layer of fat on plate glass sprinkled with layers of fresh flowers. Process repeated until fat is saturated. Results obtained from this and the macerated process are known as flower pomade.

The few products and processes mentioned here are but slightly suggestive of the rapidly widening use of a class of industries in which discovery has just begun, and in which producture and manufacture follow a growing demand made effective by new laboratory processes.

Kinds of Electric Furnaces

Description of the following furnaces may be found in any text book on mechanical appliances or industrial chemistry:

(1). Intermittent furnace.
(2). Continuous furnace.
(3). Multiphase furnace.
(4). Revolving furnace.
(5). Muffle furnace.

Inventions and Discoveries.

Carborundum—1891, Acheson.
Artificial Graphite—1896, Acheson.
Calcium Carbide—1888, Willson.
Chrome Tanning—1884, Schulz.
Diesel Oil Motor—1900, Diesel.
Cyanide Process for extracting metals—1888, Arthur and De Forrest.
By-product Coke Oven—1893, Hoffmann.
Centrifugal Creamer—1880, DeLaval.
High Speed Steel—1901, Taylor and White.

Reference Reading.

Chemical Industry on the Continent—Baron Harold.
Reference List on Electric Fixation of Nitrogen—Bulletin, U. S. Department of Agriculture.
Utilization of Atmospheric Nitrogen—Bureau of Commerce and Labor.
Chemical Raw Materials and Manufactures—J. Russell Smith.
Industrial Chemistry—Text.

General References.

Students desiring wider and more detailed knowledge, or current information on particular industries, or industrial processes are especially recommended to consult a good text in Industrial Chemistry, and trade journals.

The following is a partial but very suggestive list of helpful publications:

Subject	*Name of Journal*	*Where Published*
Iron	Iron Age	New York
Coal	Black Diamond	Chicago
	Coal Age	New York
Petroleum	Petroleum Review	London
General Textile	Textile World Record	Boston
Leather	Shoe and Leather Facts	Chicago
Rubber Manufacturing	India Rubber World	New York
Machinery Trade and Manufacture	American Machinist	New York
Coal Tar and Dye Stuffs	Paint, Oil and Dye Review	Chicago
Vegetable Oils and Extracts	Paint, Oil and Dye Review	Chicago
Soaps.	Soap Gazette and Perfume Journal	New York
Mining and Mineral Industries	Engineering and Mining Journal.	New York

American Review of Reviews.
The World's Work.
The Technical World Magazine.
Engineering Magazine.
Popular Mechanics.

More than Two Years of Latin

By Carrie B. Allen, Latin Department, Newark, Ohio High School.

THE practical tendency of the age is gradually choking the longing for the more cultural subjects. The writer feels like Cato in his advanced years when he said, "It is hard for a man who has lived in one age to defend himself in another." But let us hope when we are defending our subject of Latin that we may not fall into Cato's habit of condemning with no policy of reconstruction—committing the unpardonable fallacy of lauding the charms of poverty and living in luxury. When the colleges, which should stand pre-eminently as the gaugers of a nation's aspirations culturally, let down the bars our troubles began. We all know what happened in the case of Greek and reasoning from anology we see what may happen in the case of Latin. I thank whatever gods there be that I was not deprived of the pleasure derived from the study of Greek. It had such an effect upon me as did the daffodils upon Wadsworth. "I but little thought what wealth the show to me had brought." That incomparable language opened to me the gates of beauty. It was probably not utilitarian; but some one has said that we cannot live by bread alone. This reason, which seems sufficient for the study of both Greek and Latin, will have no showing with the ordinary second year high school boy or girl. Let me quote Dr. Abraham Flexner's view of the study of Latin as published in the Atlantic Monthly. "If one does not study things because they 'train the mind' why, then, should one study them? The answer is extraordinarily simple. One studies things because they serve a purpose. I do not say, mark you, a useful purpose, but a purpose—a valid purpose, a genuine purpose, not a make-believe purpose. Mental discipline is not a valid nor a genuine purpose. It is a make believe. Meanwhile the number of purposes, of genuine, valid purposes, is simply infinite. Learning to read Virgil is of course just as valid a purpose as learning to play

a symphony or learning to bake a pumpkin pie. The test is, however, not: Did the student get the mental discipline? but, Can he read and enjoy Virgil? Can he play the symphony? Will some one eat the pie? And because people rarely care to read Virgil because almost none of the thousands who study Latin ever can or do read Virgil, therefore, in so far as they are concerned, studying Latin has no purpose and cannot be defended as mental discipline."

Being a firm believer in the theory of mental discipline, this statement of Dr. Flexner's does not give me pleasant thoughts. My own experience in the case of Virgil shows me that I was one among those who read Virgil unknowingly. To this day I am sensitive over the translation of the passage "of that dark urn that held the remains of Aeneas' nurse"—but it has given me a wonderful sympathy with the girl who in the account of the funeral rites in honor of Palinurus remarked that "that brought on the hot drinks." Yet, as I look back upon that Virgil class I see a teacher of great enthusiasm, with much imagination, which qualities have a faculty of permeating nearby individuals, and I learned to have a respect for duty, and fate and perseverance, to love the sea, flowers, bees, to pity poor Dido—many things I learned which I cannot tell those who advocate utility first and foremost.

I must quote old Cato again. He was having a heated controversy and I imagine was worsted, from the following remark: "We are not contending on equal terms; you are accustomed to hearing and using bad language, whereas I am unused to hearing it and unwilling to use it." So we Latin teachers are not careful enough to have a supply of utilitarian arguments and to use utilitarian methods in our first and second year class work. We must reserve our cultural arguments and cultural methods for third and fourth year work when they may have some effect. The reasons that seem to us most vital cannot be impressed upon the general run of Freshmen and Sophomores nor upon their utilitarian mothers and fathers.

As I look upon the case, if we have taught the first two years of Latin well, I think we have given the greatest good possible to the general student. We have, unknown to them, taught the philosophic basis of both Latin and English grammar; they have become acquainted with most of the roots that form the basis of the

60% of English words; they have had incomparable mental drill in association, discrimination etc. which can only be secured from the study of a highly inflected language. We have done this and much more; but all minds are decidedly not meant for the future pursuit of the subject. If from our beginning classes we have 20% to 25% in our Senior classes can we ask for much more under our compulsory school age of 15 to 16 years? Aren't we holding our own and could any other four years course keep, under our elective system, a greater number? I think not. Our school holds a record for such a per cent. Perhaps I am over satisfied, but my experience with human life has led me to think we must not expect too much.

The first thing to stimulate a desire for more Latin is I think unquestionably a good, wide-awake teacher. If such teachers are needed anywhere they are needed in the classical department. The greatest possible advertisement is an active, inventive up-to-date man or woman. A slow, solemn and worn-out teacher in a Latin classroom is a sure sign that the language taught is "dead" for a fact, in influence and results. Would that superintendents would think of this and thus help out the cause! The very fact that an individual of scholarly attainments and progressive character handles the subject proves its worth. We are too prone to act on the theory that the sanctity of our subject protects us and explains us rather than on the assumption that we ourselves are the subject's best advertisement. Up-to-dateness seems inconsistent with our backward view. Time has never dulled the lustre of the great laws of life, they are ever bright and new as when the world began. We Latin teachers must stand for the beauty and joyousness of early thought and life as pure Greeks, not with a defeated air acknowledging, much to our sorrow, that "great Pan is dead."

Another great source of influence is the use of classic art. If the Latin department were allowed one-half the money spent upon the physics or chemistry laboratory or upon high school athletics each year, what an advertisement we would have for our department! All high school pupils are pure Missourians. They see the high school letters and hear the cheers, they handle the acids and apparatus, but Latin is the intangible,—no fun, only the mill that grinds, the teacher the upper mill stone and they the lower.

In my own school we are fortunate in this line and I know it has had its effect. Our halls contain quite a collection of casts and pictures. There is stately Minerva on her pedestal, the long Parthenon frieze, Venus-de-Milo, Apollo, Hermes, great and pathetic Homer, Zeus with his ambrosial locks, a beautiful Amazon, stern Caesar, placid Virgil nearby, whom one student reported as Caesar's wife (but he's learning), Niké untying her sandal; all in plaster. In pictures the list is long,—Cicero and Catiline in the Senate, the Coliseum, Parthenon, Hadrian's tomb, a Reading from Homer, Greek Girls Playing Ball, Roman Chariot Race and many more. The classics are still living in our halls, however dead they may be in our Latin recitation rooms. But *there* also are well selected pictures, slabs and busts. The constant sight of these things is making for good. Our school holds an unusual record for students entering college and it is not all attributable to college athletics.

One means of extending interest in the classics has been sadly neglected. The ancient history classes should be taught by the Latin teachers. This is beneficial both to the teachers and to the pupils. First and second year Latin teaching is especially hard work. The Latin teacher is enabled to bring more of the human element into her work when thus constantly in touch with history. This is proven by practical experience. The shortness of our recitations precludes most historical work in our first and second year but a wide-awake teacher, fresh in historical knowledge, can bring an enthusiasm to her work unknown to the regular Latin teacher. It is needless to say that this enthusiasm heightens the interest of the pupil many fold. But the Latin teacher gains her greatest hold in her history class. Most high schools require ancient history in the second year correlative with Caesar. To have its best effect the history divisions should be based upon courses thus giving the Latin teachers the Latin pupils. Here we find real correlation. Now there is time to clothe the dry bones. The study of the life of the people who used the language makes the language a real medium of thought, not a machination of symbols. My experience has been that Latin pupils who have studied ancient history under Latin teachers generally continue the Latin work. Here is a great chance for the use of the lantern with

slides. Caesar and his wars become actualities, not a mere system of subjects and predicates. The glory of Rome is seen and the pupil realizes why this language may be worth studying. The teacher who teaches the language should surely teach the history. Too often the regular history teachers miss or lack a true appreciation of ancient life in a general preferment for modern and American history. I should urge every Latin teacher to request an ancient history class for his own good and for the good of Latin in general.

Quotations from Cicero, Virgil and other Latin authors from a frieze on my blackboard are changed quite often, one at a time, and interspersed with short colloquial phrases. The younger pupils are made curious and often memorize the Latin and its meaning. Latin quotations are inserted in the high school paper. The baling and selling of the waste paper in the school is in the hands of the Latin pupils. We thus secure a revenue not to be despised, for our art collection. Our ambition is to have one of the best art collections to be found in any high school. We discuss what we shall buy, write descriptions of our possessions in this line for the school paper; bridges are made. But what Caesar class does not make bridges! The whole idea should be activity—growth! We too must be modern, must add our activity to the thought and life of the school. Latin pupils should be urged to be on the debate teams. Prove that Latin drill work does make for clear thinking and expressive thought. The only way to create a desire for more Latin is to make the Latin department an active, not a passive force—to show our wares and their excellent points, not to passively rely upon the merit of a subject which having lasted 2000 years, we conclude must therefore be able to stand for itself and blow its own horn. We, its teachers and exponents, must do the blowing if we are to keep pace with this advertising age.

The Physical Diagnosis of Backward Children

By Robert MacDougall, New York University.

MONTAIGNE'S saying: "We have not to train up a soul, nor yet a body, but a man; and we cannot divide him," has frequently received a one-sided interpretation, though the very point of his splendid aphorism is that this reciprocal relationship should be read in both directions equally. The fortunes of soul and body are inseparable. A sound mind cannot exist in partnership with a diseased nervous system. Disorders in the one are either reflected in the processes of the other or arise from interruptions of its normal activities.

When the point of departure is the bodily condition we read these signs with facility in both hygienic and therapeutic problems. In health this attitude is expressed in our recognition of the value of physical culture. It is the strongest plea for systematic training of the body that it helps in the harmonious development of the whole man. In disease it prompts us both to alleviate the mental troubles which such disorders entail, and to seek for the sources of functional disturbances in abnormal conditions of mind. The final significance of health and disease can indeed be stated only in terms of consciousness. Illness is a problem because it either causes discomfort or limits activity; and the maintenance of a tone of vital well being and the capacity for full and spontaneous reaction upon the world lies at the root of all therapeutics. Nevertheless, in so far as the treatment is medical, it is immediately concerned solely with the establishment of those conditions of physical well being upon which healthy and happy activity depends; and the physician takes into account the mental condition of his patient only as a possible furtherance or hindrance in the attainment of that object.

When the point of departure is the mind and the problem concerns the treatment of its disturbances, or the maintenance of proper hygiene in health the recognition of the interrelation of mind and body has but recently become an accepted principle of

method. It is perhaps because our interest lies finally in the mental state itself that we have failed to seek the conditions of these phenomena uniformly in terms of their physical concomitants. They have commonly received at our hands an intellectual or moral interpretation and our judgment is expressed in the terms stupidity, criminality and insanity.

It is a striking instance of the reconstruction of view which results from the advance of knowledge that mental abnormalities have come to be considered in their relation to pathological conditions in the physical organism, and that in consequence therapeutic methods have taken their place along side of punishment and protective measures in the treatment of mental and moral degenerates. This substitution was first effected, where the nervous degeneration is most evident, in the treatment of insanity. In all civilized countries the alienist has replaced the gaoler, and the use of harsher measures, where they still persist, is due solely to the failure of a local administration to apply in practice, principles which theoretically are universally accepted.

The same conception has obtained a permanent foothold in penal institutions; but here its application is limited by the fact that the physical basis is much more obscure than in the case of insanity, and that a complete elimination of punishment is impossible so long as moral distinctions are preserved at all. Nevertheless, in the criminal as surely as in the insane subject, certain stigmata of physical degeneration,—under-development, asymmetry, organic or functional defect—are being established and the foundations thereby laid for an extension to them also of therapeutic treatment. Especially in the young is a beneficial result to be looked for, since hygiene and prophylactic measures, if applied during the adolescence phase of life, may be successful in cases which at a later stage are susceptible only to palliatives.

The application of this concept to the third class of cases is largely still to be made. Physical diagnosis of dullness and stupidity, of shiftlessness and inefficiency, of carelessness and awkwardness, seems almost a burlesque of method. These are mental attitudes and conditions which, if they are to be reached at all, must be approached through ethical and practical incentives. For the most part they are regarded as permanent mental types which

must be reckoned with as facts, but which are not susceptible to any considerable amelioration, and are related to bodily characters only as mind in general is conditioned upon physical structures and functions, and not as the manifestation of special and modifiable conditions. Judgment is passed upon them as intellectual defects or moral obliquities, and their subject becomes an object of pity, contempt, reproof, and no more.

This may be true as concerns the inefficient adult, for the negative as well as the positive forces which determine individual disposition tend toward a rigidity of type which presents increasing resistance to formative influences of all kinds. The outcome of habituation is stability of relationship whether its results be good or bad. Disorder and carelessness may be cultivated as successfully as method and thrift, and in their final forms the two types are alike ineradicable from the individual life. But the obstinacy and hopelessness of these mental attitudes in the adult should not lead us to regard them as necessarily original and persistent diatheses which are not subject at any stage of their history to the influence of transforming agencies. Such a conclusion overlooks the distinction between instinct and habit, between hereditary degeneration and nutritional disorders, between a fixed congenital temperament and a formative and therefore modifiable process. If it be true that the criminal is largely a product of training and environment,—underfed, undergrown, maltreated—it is no less a fact that those minor mental abnormalities which we call in general dullness and inefficiency are, in part at least, phenomena of developmental arrest to which hygienic and prophylactic treatment may be successfully applied.

The problem, therefore, has its chief significance in connection with the education and training of the young, and concerns the home and school as closely as an investigation of the physical characteristics and history of the criminal concerns the penalist, or the determination of nervous lesions and degradation the alienist.

Even were these types fixed, were it hopeless to try to improve the condition of the backward or inattentive child, it would still be an important service to determine the physical conditions which underlie these mental limitations, in order that the attitude of the parent and teacher might be adjusted accordingly. The child

who confuses colors, or writes crookedly, or makes a mistake in his reckoning or dictation should not be punished for carelessness if his failure be due to color-blindness, chorea, diplopia or defect of hearing. Just and intelligent treatment of the child in school can proceed only upon a knowledge of such physical deficiencies in cases where they are at all pronounced. To act in ignorance of their existence is to go certainly astray and to arouse a sense of injustice on the part of the child, than which nothing will more quickly undermine the influence of the teacher.

The tendency to lay the blame of undesirable mental characteristics and habits upon an acquired or inherited physical diathesis is of course liable to exaggeration, with consequences as serious as those entailed by an entire ignoring of the relations which exist between mind and body. One can sympathize with the distinguished lecturer who lamented that when a schoolboy his failure in arithmetic was explained, and excused, by reference to the stupidity of his grandfather, instead of being treated heroically as was the custom in a neighboring school, where the birch was found a most astonishing modifier of heredity and the boy far outstripped his own school in mathematical studies. Such extravagances are certain to be ridiculed and yield readily to the ironic laughter of men. But caricature of the point of view itself is cheap, and touches only the eccentricities of method. The serious teacher can be in no danger from the most thorough knowledge of these physical symptoms in judging the faults and deficiencies of her pupils. The results of the process of education are imperilled to an incomparably greater degree by ignorance of the bearing of physical pathology upon these peculiar mental conditions than by the influence of a supine fatalism which might possibly result from a knowledge of them. The fullest recognition of the part which such disabilities play in the production of faulty and disappointing work on the part of the pupil need not lessen by one iota the strength of the teacher's appeal to moral and intellectual incentives, while it will certainly prevent many mistakes as well as assist in the establishment of that mutual sympathy and respect upon which the success of her teaching vitally depends.

Such physical diagnosis, it may be said, is the work of the physician. It requires his professional training to interpret the symp-

toms which are immediately discernible and to elicit those which can be ascertained only by enquiry of the child or its parents. The teacher does not know what things to look for, or what questions to ask. Especially is she liable to err by seizing upon and emphasizing a single feature of the case; for diagnosis does not proceed upon an isolated symptom but is an interpretation of the whole system of signs which the appearance and report of the child afford.

This is indeed true; and wherever the preliminary observation of the teacher discovers a physical disorder at the root of the mental phenomena which prompted the enquiry, the services of the physician should of course be called in by the parents and the case turned over to him. But it is not practicable to have professional inspection in the first instance. There are many cases which lie on the borderland between health and illness, in which the sufferer, though not perfectly normal, appears scarcely to need medical attendance. These children are not defective in the technical sense but from some obscure cause,—a lowered physical resistance, nutritional defect, and the like—are unequal to their tasks, are burdened, excitable and irregular in their work, or in some way are marked out as needing special attention.

The problem which these individuals present is not met by a brief stated visit of inspection; they require watching and study which only the parents and teacher are in a position to give. The observation of many of their symptoms needs not professional training but only the tact and discernment of an educated intelligence; and the treatment is frequently such as the teacher can apply or advise. Much of this intimate study of the child, if done at all, must be undertaken by the teacher, for it is only a knowledge of his work and conduct in school which leads to its inception, and the existence of physical defects may be wholly unknown to the child himself. The function of the teacher in this connection is therefore to supplement that of the physician by an intelligent psychological observation of the child, and the application of such remedies as the layman can employ.

The various cases with which the teacher will be called upon to deal may be grouped under three fairly well marked types, namely, under-nourished, neurasthenic, and defective children. Disorders

of the first class are most readily discernible. In the physical diagnosis the first step should be to note whether any striking departure from the normal size is presented. The child grows at a rapid and irregular rate. The total advance, as well as the part contributed by the various constituents of the body, fluctuates from year to year. Phases of activity and rest alternate in the processes by which the individual attains his full stature, and one period manifests greater vigor and capacity for work than another. The various parts of the body also grow at different and independent rates, and one system of functions may be in a phase of activity while another is at rest. The unlike curves of skeletal and muscular growth for instance, become pronounced during adolescence, and give rise to the awkwardness of movement and "growing pains" of that period. The functional activities of the nutritive and reproductive systems exhibit inverse relations and are advanced at each other's expense. Functional development and capacity for resistance progress by alternate strides.

The growth of the body thus consists of the results of an irregular advance on the part of a multitude of structures which may present highly individual curves. A well-rounded physical ideal, in which all the parts maintain harmonious proportions from year to year, is impossible; and in the level attained by the body as a whole, as well as in the growth of its individual members, there is a wide variation within the limits of health. Nevertheless each year has its normal stature and normal rate of growth. To depart notably from this standard in either height or weight indicates an abnormal condition, especially when, as is commonly the case, the divergence is not proportional in all parts of the body. The giant and the dwarf are not usually symmetrically exaggerated or reduced copies of the normal man. Gigantism arises from disproportionate growth, dwarfism from pathological arrest of special parts of the body; and it is just this loss of general balance in the bodily system which forms the sinister indication of abnormal conditions in the process of development. The failure of the child to maintain the proportions of normal growth is a more important diagnostic feature than his deficiency in stature and weight if the departure from the standard be symmetrical; but the condition of general malnutrition is itself grave enough in connection with the matters here discussed.

The stunted, undergrown child is in arrears mentally also. Porter's statistical investigations have shown that there is a physical basis for precocity and dullness. The bright children of every grade in the public schools are the tallest and heaviest for their years, and have the largest chest girth. The dull children are below the average in all these things. Of the dull children as a special class the same relation again holds true; the dullest are the most under-sized, the brightest are nearest the norm of physical growth. The vigorous child needs no special care. If he is backward in his studies the teacher must look elsewhere for the cause. But undergrowth and mal-nutrition are direct correlatives of mental deficiency, and when a child is behind in his work and the teacher is called upon to seek causes and pronounce judgment she should look first in her rough diagnosis to the presence of such physical stigmata of backwardness.

When children are thus manifestly of deficient growth, when the balance of height and weight has been upset or the rate of development abnormally retarded, the diagnosis presents little difficulty. The really perplexing cases belong to the second type. These children are not small in size but fairly grown, not sluggish in disposition, but active and commonly of good complexion, not stupid but frequently among the brighter members of the class. Yet they are disappointing, because their work is irregular in quality. When good results are expected, since the child is known to be capable, he blunders, forgets, becomes confused and entirely disappoints the teacher's hopes.

Such children have commonly a low nervous resistance, and though bright, are incapable of prolonged exertion, in consequence of which their work shows a rapid deterioration in quality under continued pressure. It is this class which makes school fatigue a problem. The normal child tires but may be left to look out for himself. He can stand the ordinary conditions of school life without suffering, and fatigue though present is healthy; for it is paralleled in its development by an increasing mental weariness which puts an end to the child's activity long before the danger zone of physiological exhaustion has been reached. In those of nervous instability, on the other hand, though the onset of fatigue is abnormally early and the rapidity with which it mounts ex-

cessive, yet the stimulus of work may set up an artificial condition of excitement under which activity is continued to the verge of collapse. Hence the often unaccountable changes in the quality of the child's work, which may show either a sudden falling off, an equally perplexing brilliancy or a complete break-down.

In such cases the teacher should look again to the physical conditions which are presented in connection with the problem of discipline or treatment. First as to the child's general activity and psycho-physiological balance. Are there characteristic times when such disappointing results appear, for instance late in the day, or even in the week? Has the child been doing prolonged work, or carrying it on under special strain? Is there general disturbance in his conduct or mental state: is he troubled about his work, discouraged, changeable in mood, easily excited to tears? It is the whole group of symptoms which is here significant rather than any single feature, but if the characteristics already described are manifested in any high degree the teacher should turn next to the bodily condition itself.

The child may simply be less strong than his fellows, in which case all that can be done is to lighten as far as possible the pressure of school tasks. But it is more likely that he has a tendency toward a neurasthenic constitution, that the low nervous condition lies rather on the pathological than on the normal side of the line. This general fatigue of the nervous system is accompanied by a state of morbid excitability. The physical basis and antecedents of the trouble are obscure and its manifestations extraordinarily manifold and variable. Since upon the normal balance of nervous functions the health of all the bodily processes depends, the disturbance of this equilibrium which occurs in neurasthenia naturally produces wide-spread effects, which include both degraded organic functioning and exaggerated reaction upon the environment.

Nevertheless in this protean multitude of symptoms there are certain classes which it is helpful to note. Is the child incapable of sustained physical effort, and is he tremulous and unduly fatigued after exertion? (The diagnosis will concern chiefly the older children of the school, as few cases of neurasthenia occur under ten years of age). Is digestion disturbed and sleep trou-

bled? Is the child distressed by sensory abnormalities: sensations of heat, cold, or numbness on local areas of the body, ringing in the ears, and blurring of vision after the use of the eyes? Is he troubled with migraine, vertex of basal headaches? Is he emotionally excitable and given to fits of anger, depression and so-called "nerve-storms"? The indication of neurasthenia is strong in proportion to the prevalence of the disturbances outlined.

The treatment of these cases, which should be referred to the physician without delay when the symptoms are pronounced, present many difficulties even to the expert; but many of them hover between health and such a condition of disease as enforces medical attention, and the problem must in the first instance be met by the teacher. The children remain in school because no localizable ailment exists. They are active, interested and frequently precocious. Yet they are irregular in their work, excitable, centers of disturbance in the school and often a burden as regards both method and discipline.

It is valuable to the teacher to know the nature of the problem with which she has to deal in such cases, but in the way of therapeutic treatment, after the physical basis has been pointed out to the guardians of the child, little is within her power. It is probable that only hygenic measures will have effect. The whole nervous system needs tone, which can be brought about only by a slow physiological regeneration, the means to which lie chiefly in functional rest, with simple food, abundant sleep and a life as much as possible out of doors. Under the best of conditions the improvement often seems insecure. For the teacher there remains the duty to endeavor by a recognition of the physical basis underlying the peculiarities of neurasthenic children to meet their attitudes with understanding and justice; and by avoiding overstimulation and helping the child over his crises, as they occur, to ease the burden under which he labors.

There is a third general class of physical troubles whose relation to mental activity, one would say, could never for any considerable period remain in doubt; but which yet as a matter of fact escape detection, with the result that their consequences are regarded as having purely mental origins and the child suffers accordingly. I mean defects of the special senses. Blindness and

complete deafness of course cannot but be recognized; yet a disabling injury to these organs may be developed without its existence being suspected. If the change be slow, or affect only one member of a double organ, the subject may remain unaware of it until its presence is revealed by some external test. These sensory defects are common among the young as well as the old. In Germany thirty to forty per cent of the children in the public schools are reported to have defective eye-sight. The same is true of ear troubles. One-third of all adults suffer from partial deafness and at least one-tenth of the children of school age.

These functional disorders entail frequently recurring mistakes. Blackboard exercises, the use of maps, object lessons, and all work involving visual discrimination are made more difficult for the near-sighted; sounds are incorrectly caught, names confused and directions misunderstood when hearing is imperfect. The child adjusts himself to these abnormal conditions and guesses at what is imperfectly seen or heard; and when he guesses wrongly the errors are interpreted on a purely mental basis and the child is punished for inattention and laziness. What other result is possible if neither the teacher nor even the child himself is aware of the physical deficiency which exists?

But these are not the most serious types of sensory defect from our present standpoint. Astigmatism, double vision and unequal refraction in the two eyes give vastly more trouble than simple decline in ocular adaptability. For these abnormal conditions produce distortion of the object and make it impossible for the child to see correctly what is within the limits of distinct vision. A case has recently been reported from a New York city school of a child suffering from diplopia who at first made constant mistakes in consequence of the doubling of objects when looked at with her ill-assorted eyes. She finally learned by bitter experience that she could not trust these eyes, but when she saw a double "S" must write it single, and put down only one figure "5" where she saw two.

In hearing, a disorder occurs which affects only certain qualities and combinations of sounds, and which has been called tone-deafness. The greater part of the musical scale is correctly apprehended but here and there the ear fails to respond to a par-

ticular note. Certain consonantal sounds and combinations also seem to escape some hearers, or to be misapprehended, because of an analogous imperfection in the auditory process. Such a disturbance affects the child in a very different way from simple hardness of hearing, being manifested chiefly in a distortion of the reproductive processes. Most sounds and words are heard correctly but the child makes unaccustomed and persistent errors at certain points in pronunciation, spelling, dictation, and the like; and these are peculiarly liable to be attributed to mental faults rather than to his bodily affliction.

From the point of view of the child's health the most serious aspects of these refractive imperfections of the eye and troubles in the inner ear are the grave functional disturbances,—digestional, nervous, etc.,—and permanent organic lesions by which they are frequently accompanied, but with these phenomena we have not here to do.

There should be no need to call attention to such pronounced interferences with the expression of mental activity as are presented by obstructed speech, chorea and the like, because the origin of the trouble in these cases is readily and correctly located. Yet in their incipient stages, or in minor forms, even these disturbances may escape notice; and in cases of constitutional diffidence and hesitating speech or lack of co-ordination in writing, it is well to enquire as to the presence of one or other of these subtle forms of inner inhibition.

In these cases of nervous instability, and in regard to sensory and motor defects generally, the teacher need not be reminded how important it is to avoid exciting or confusing the child. An abnormality of function, as truly as a defect of form, is felt by its victim to set him apart from his fellows, and the child is likely to be peculiarly sensitive in regard to it. When embarassment or distress is occasioned by the result of the disorder it adds many fold to the interference caused by his physical disability. A sympathetic attitude brings out all that is best and brightest in the child; a sharp word or inconsiderate action may scatter his power beyond the possibility of recall, and induce a mental paralysis beside which the stage fright of an adult is but the pale reflection of reality.

Pupil Self-Government

Red Bank, N. J., Dec. 12, 1916.

To the Editor of Education,
c/o Palmer Co.,
120 Boylston St.,
Boston, Mass.

Dear Sir:

I have read Mr. Smith's article on "Pupil Self-Government" in your December number, with a great deal of pleasure. He has had some very interesting experiences. I should like to contribute the results of my own experience in the Flemington, N. J. High School, which had more than two hundred pupils.

I had always believed that the finest type of discipline was liberty under control. By this I mean that sort of discipline that encourages initiative, allowing such freedom of action and thought as may be necessary for fine, round development, encouraging perfect freedom, so long as such freedom is used seriously for the general good of the mass and the individual, but with a check,—the teacher,—when there is a temptation to interpret such freedom as meaning license. I had little faith in such form of government as was used in the George Junior Republic, for example. I had never been convinced that high school boys and girls had reached the age when they should be trusted to govern themselves, and much less to govern others. It seemed to me that they possessed but a small development of those traits and capacities that are necessary to the successful initiation and fulfillment of any sort of democratic government. It had never occurred to me that it was the business of the high school to help develop such traits as self-reliance, independent thinking, etc., and that the surest guarantee of the success of democratic government is the preparation of its citizens for such government, through the development of those traits.

One afternoon a few months after I had taken charge of the above school, a committee waited on me in my office. Of course I listened to what they had to say. They had come to propose to me a system of self-government, but their plans were not at all well formed. They had no notion of how the plan was to work out. They thought that I ought to tell them just what to do. They also thought that anything so simple as self-government could be put into practice immediately, and proposed that I say to the students the following Monday morning that from that time on, they were to constitute a self-governing body. Only one thing appealed to me. The students really wanted self-government, and that seemed to me the first essential of any gov-

ernment. Those who are to live under it must want it enough to fight to get it, and be willing to sacrifice much to retain it.

I told the committee that I was interested in what they had to present, but was not at all sure that they were ready for self-government, as they had no plan that was worth the name. If they had a plan that they could prove to me would work, they were to come back in one month to present it. In the meantime the pupils must prove to me, and to our teachers, that they were ready for such a change. As teachers, we were all skeptical, but there was such a change in the students' attitude during the following month, that our doubts changed to high hopes and we waited. On the day appointed, the committee returned with a full, well-planned scheme. It was simple at least. Very little machinery was needed in its operation. During the intervening month many student meetings had been held. I was asked to attend these, but made few recommendations except when asked to do so. My theory held that this must be purely a student movement, if it was to have deep enough roots to succeed.

The governing body was to be made up of three representatives from each class, appointed by the class president. Four were to be chosen by ballot from the school at large. The principal was an ex-officio member. The body was called the Committee of Seventeen. It was the business of this committee to see that the teacher's time in the classroom was left free for teaching only, but she was not to be deprived of the right of discipline if it were necessary at any time for her to assert herself. However, disorder in the classroom was a crime against the social unit, the school, and was to be passed on, by the Committee of Seventeen. So far as hall or study room and noon hour discipline were concerned, it was in the hands of the Committee entirely. Misconduct on the part of any student was to be reported by the class representative. The Committee was to meet weekly, or oftener if necessary. The plan seemed good to me, and I consented to the inauguration of the new government.

It is too long a story to go into the many trials and tribulations of this Committee. It is sufficient to say that for three and one-half years it was never necessary for any teacher to visit a study hall for the purpose of discipline, or to reprimand a student for disorder in halls, basement or playground. Of course, there were breaches of discipline. There are breaches of discipline every day on our streets, by those who are old enough to know better. There is bad conduct in high office in many of our states. This fact was recognized and talked about by our students, not that they might be justified, but that they might avoid such conduct in their government. It was a splendid success for the following reasons:

1. It was a student, and not a teacher, movement.
2. The student body was ready for self-government.

3. They were willing to sacrifice many former privileges to show the teachers and the town that they were able to set up a stable government.

4. The teachers of the High School were in full sympathy with the movement, and never interfered in any way, unless called on by the Committee to do so.

I do not believe the student self-government can succeed under any other conditions. It will never be much of a success if forced on the students by the teacher body. It will never be much of a success unless the teachers have good sense, and sympathy for, and understanding of the movement.

The student body need not be a picked or homogeneous class. The students of the above school were, for the most part, from fine families, but the finest chairman the Committee of Seventeen ever had was a Russian Jew, lately from the New York east side.

It was a real preparation for future citizenship. Some of those students are leaders now in the affairs of life. The realization of power came to them at the right time, and along with this there came a realization of the obligations of good citizenship. There was a great rise in student self-respect. What man does not hold up his head with pride, if he is a man of his own affairs, and has a clean record? There was real freedom under control, because the control was of the right kind, and it was self-imposed. The severest punishment for any student by the Committee was to deprive him of his part in the affairs of the body politic. Lastly, two or three teachers were left free every period of the day for conference in their own classrooms. They were relieved of the strain of study hall duty, etc., and gave their time to the pupil who needed it most.

I am sending this communication with the feeling that it might be of interest to you. I should be glad to have you publish it if you care to do so. If not, I shall not be in any sense offended. I have read your magazine for many years, and have felt many times that I should like to contribute something to its success.

Sincerely yours,

PAUL R. RADCLIFFE.

American Notes—Editorial

Why the teacher? The question sounds primeval and simple; but the reasons for things that have become customary have to be restated once in a while, in the interests of clear thinking and efficient practice. It is to be feared that too many estimable young people drift into the great stream of candidates for teaching positions, coming from the colleges and normal schools without any adequate conception of why they should give themselves to this kind of work, beyond the mere necessity of doing something to make a living or to tide them over in a respectable occupation until the opportunity offers for them to be married. It is unfortunate that so important and so serious a calling should ever be used as a makeshift. It should be as sacred and be taken as seriously as the ministry or as maternity.

The reason for the teacher's calling is found in the necessity, in a complex state of civilization, for a division of labor. Naturally we should expect the parents to be the teachers of their children. Such is the case in the brute world and in the lower stages of human civilization. But as life grows more complex, the activities of communities, of necessity become specialized. The child's maintenance, the home he abides in, the food that nourishes him, his clothing, and his general social environment and training occupy the entire time and energy of his parents, from the moment of his pre-natal existence, to the hour of his maturity and independence. Meanwhile the great body of accumulated knowledge and experience, gathered by countless millions of human beings down through the ages, has become so vast that to make it available to the individual, necessitates trained bodies of specialists, who, with all their time and with all their energy shall appropriate from this vast storehouse the most important and necessary things, and who shall study profoundly the best methods of transmitting them to the successive oncoming generations.

In this great sub-division of labors, it would be hard to say which is the more important, the work of parentage or the work of education,—the work of the father and mother or the work of the teacher. Both are essential to the maintenance and welfare of the race. Both are so great as to be mutually exclusive. Ordinarily the teacher must remain single while she teaches; and the mother must delegate the teaching function mainly to the teacher.

Some important facts follow from the main idea presented in the above paragraph. For one thing, it should become clear to the

thinking person that the teacher is worthy of his or her hire. A more liberal estimate should be made of the value of the teacher's services. These services should command a better price than the mean and niggardly sum that is so often voted at the town meeting or by the city government for the all-essential labors of those who are doing the work of education, which has been delegated to them by the parents who are unable to do it themselves. Work of other kinds that must be done, usually commands its price. The more difficult and costly the preparation, the higher the price! To become a good teacher requires years of preparation; and, as above indicated, not infrequently the permanent renunciation of some of the fondest ambitions of the normal woman. The reward should be more commensurate with the sacrifice. We believe that we shall come to see this matter in its true light and not only increase the wages, but also lessen the labors of the individual teacher by giving her fewer pupils, to whom she can give more individual attention, thus greatly increasing the efficiency of her teaching. Let us do all that we can to create an enlightened and liberal public sentiment along these lines.

Still another deduction from our main premise is that the citizens who vote the money and pay the bills have a right to expect that the teachers shall really succeed in educating the children,—the dull and slow ones as well as those who are quick and bright. There is a tendency in many schools to be satisfied with the attainments of the best scholars, to put them forward, show them off, and base upon them the reputation of the school for success; while the backward children, who are most in need of help, are passed by, put back at the end of the year to do the work over again, and sometimes thrown out altogether, or made so uncomfortable that to save their being ruined, their parents are obliged to take them out and send them to private schools or tutors, where they will get the individual attention which they need.

When we pay the teachers as they should be paid, and when we cease overcrowding the schools with so many children that proper attention to the individual child is impossible, then, and we fear not until then, can we "put it up to" the schools that it is their fault and theirs alone, if our child fails of promotion at the end of the year.

In line with the sentiments of the above paragraphs, we call our readers' particular attention to the "Teacher's Prayer" to which we have given the first page of this number of Education. We believe that every father or mother who reads this beautiful prayer will instinctively say in his or her heart, if not with the lips, "that is the way I want my children's teacher to feel and pray!"

With such teachers in our schools, we need not hesitate to delegate our sacred responsibilities for the education of our children. With such teachers in charge, our wage standards will quickly right themselves; and the question, "Why the teacher?" need never more be raised.

"Military training in the schools conceived as military *drilling* is undesirable and unavailing; military training conceived as a *comprehensive program* of *physical, moral,* and *civic* education is desirable and even necessary," declares Dr. W. S. Small in a chapter on educational hygiene in the Annual Report of the Commissioner of Education, Department of the Interior.

Dr. Small points out that military training thus conceived "offers a possibility of unifying and ennobling the now confused and disjointed activities in the field of physical and moral discipline. The physical and moral values of both gymnastics and athletics are well understood, but both lack comprehensive and unifying motive. All systems of gymnastics are individualistic. Their appeal is to the desire of the individual for physical perfection. Competition is narrowly individualistic. Systems of athletics are mostly based upon group competitions, and if properly managed are very valuable, not only for physical development but also for training in the very fundamentals of social morality. But the philosophy of athletics is the philosophy of play, and the philosophy of play is the philosophy of instinct—a philosophy that is not comprehensive enough to serve as a sole basis of physical and moral education. Military training rightly conceived includes these motives and subordinates them to the ideal of patriotism."

The report describes and discusses the so-called "Wyoming plan" originated by Capt. E. Z. Steever, U. S. A., outlines the plans of the New York military commission in relation to physical training, and analyzes the relation of military training to school organization, concluding that "military training in the strict and technical sense will not be grafted upon the schools, but military training in the sense of a comprehensive program for physical, moral, and civic education in which some appropriate military affairs may be included is likely to find its way into all schools."

Not without its bearing upon the subject of national preparedness is the contention that "home gardening, directed by the school, is the most effective way for bringing boys and girls into closer relationship

with the affairs of life," as asserted by C. D. Jarvis in a bulletin on "Gardening in Elementary City Schools" just issued by the Bureau of Education of the Department of the Interior. Mr. Jarvis declares: "In or about almost any city there may be found an abundance of land that may be used for productive gardening by school children. Within the limits of many cities there is sufficient land, if intensively cultivated, to supply the people with all the vegetables and a large proportion of the fruits and flowers needed. This unused land should be brought under cultivation."

"In order that the best use may be made of this land for educational and productive purposes, it is suggested that trained and experienced teachers of gardening should be employed in every city. "Such teachers would instruct the children directly and the parents indirectly," declares Mr. Jarvis, "with the result that in a few years a generation of capable gardeners would be developed. But the development of strong-bodied, efficient, and contented citizens is the real purpose and the main result of this work. With a common knowledge of the principles and possibilities of crop production, the wage-earner of the future will not need to measure his income solely by the size of his pay envelope. He will consider, also, the productive capabilities of his garden plat and the extent to which it will reduce the cost of living. He will see the advantages of a suburban home, contrasted with the crowded and unwholesome tenement."

The Bureau's bulletin points out the possibilities of gardening from the point of view of democracy in education; its usefulness in developing thrift and industry; its value as a substitute for illegal child labor; and its justification in inculcating the joy of living. The bulletin also analyzes the method of introducing gardening into the schools; describes the different types of gardens; shows the kinds of instruction and supervision that have proved useful and goes somewhat into detail in planning garden plots and the disposal of the garden crop.

The boy clubs of Kansas are out gunning for their chief enemy, and there is an open season the year round. Mr. John A. Edwards of Eureka, the author of the anti-cigarette law, has offered prizes aggregating $200 to the boy clubs making the most strenuous campaign against the cigarette. The University Department of Child Welfare has announced this offer in a bulletin and has outlined the movement intended. As a result the boys are doing some valuable work. These prizes are renewed for the year 1917.

A year ago Labette county was organized and canvassed for pledge signers. The boys put up warning signs and bill boards along many roads and in streets, carrying various "swat-the-cigarette" mottos.

At Kansas City, Kansas, under the leadership of Mrs. Geo. J. Stine, anti-cigarette clubs have been organized in forty-three schools. During the autumn 2,000 of these boys staged a big public bonfire in which they destroyed papers and magazines carrying cigarette advertisements, and in which they burned a vast quantity of the "makins."

School Document, No. 18—1916, Boston Public Schools on Standards in Silent Reading, with suggestions on how teachers may test their pupils in silent reading, is an interesting and instructive pamphlet on an important subject. The secretary of the school committee will furnish copies on application, while they last, but applicants should inclose seven cents to defray costs.

Educational work of the Boy Scouts, Girl Scouts, and the Campfire Girls is described in the Annual Report of the Commissioner of Education, Department of the Interior, just issued. In describing the educational phase of Boy Scout work, Mr. James E. West, chief scout executive, declares: "The Boy Scout movement aims to reinforce all of the agencies which make for right living and character development in the youth of America. It does not seek to supersede the home, church, or school, but to supplement these institutions largely in the leisure time of the boy; and to impart by means of its own programs and exercises the virtues of chivalry, honor, and good citizenship. The character-building work of the movement is presented to boys in what is meant to be an "attractive wrapping." It is based largely on the method of learning by doing, in order that boys may be taught to be resourceful and self-reliant in all situations in which they may be placed."

"The movement is non-sectarian and non-political. Its program offers to the boy a well-rounded mental, physical, and moral experience, largely out-of-doors, and calculated to develop a love of country, God, and neighbor. For its success the movement depends upon the voluntary leadership of men of high ideals, who serve as scout masters and scout commissioners. The educational aspect of the work is emphasized by the fact that of the 7,067 men who held commissions as scout masters on December 31 last, about 65 per cent are college men and over 80 per cent have either a high-school or a college education; 1,655 give their occupation as clergymen, and 790 as public-school teachers; others are professional men, journalists, students, or engaged in mechanical or mercantile pursuits. In practically every one of the 350 chartered councils the public schools are definitely represented through the service of the school superintendent on the executive board, and in many cases the school superintendent serves as president of the council."

Foreign Notes

ENGLAND.—The importance of government preparation for the conduct of urgent interests, even before the exact scope or direction of its activities are defined, is illustrated by the effect of an act passed in 1910. This act, which carries the somewhat ambiguous title, "Education (Choice of Employment) Act," instructed local authorities to adopt measures for guiding young people about to leave school in the choice of an employment, and for this purpose to enter into arrangements with the Board of Trade or other public bodies having similar duties. As a consequence of the war, the activities of the local committees formed under the act have assumed unexpected importance. It is stated that in normal times the number of children entering into employment for the first time exceeds 500,000 each year. At present it is comparatively easy to utilize their abilities. Not only is there great demand for their service, but a value is put upon it far exceeding the ordinary wage of beginners in any industry. These conditions will end with the war and a large proportion of the young people who have replaced adult men in different positions, will be thrown out of employment and will increase the difficulties arising from the disbandment of the army. A special committee on juvenile education was appointed last year to investigate this problem from every standpoint. The preliminary report of the special committee, just issued, is replete with information as to the activities of the local committees on juvenile employment already mentioned. The advantages secured through this agency are shown by the experience of the last five years in all the more important industrial centers, including London, Birmingham, Manchester, Salford, et cetera, as well as towns, less industrial in character, such as Brighton, Cambridge, York, et cetera. At the same time the report calls attention to the need of great increase in the number of these committees to deal with the approaching conditions. Such committees have been created in some sixty county boroughs and forty smaller towns, but are still wanting in twenty county boroughs, most of them large towns with populations above 200,000 and in at least 130 smaller towns. It is urged that the local authorities immediately take measures to supply this need. In this connection the report says:

> it would be a grave dereliction of public duty if, whilst the means are at hand to offer valuable assistance, large numbers of young persons were turned upon the labor market without that guidance which even in normal circumstances has been recognized as necessary.

It is urged, further, that wherever the work of existing committees has been interfered with by the conditions of war, measures be at once taken to reorganize them and supply the place of officials who have been drawn into the service.

STUDY OF RUSSIAN.—The war has caused a demand in England for larger knowledge of the Russian language and public affairs in the Empire of the Czar. The Times publishes every month a Russian supplement in which literary and artistic reviews dispute preeminence with long and important articles devoted to financial and economic problems of pressing importance. Under these circumstances the study of the Russian language is rapidly increasing in the universities and schools. The University of Liverpool, which for some time has maintained a special institute of Russian studies, has expanded the course; the University of London has founded an institute of Slav studies at Kings College, and courses of instruction in Russian have been organized at Oxford, at Cambridge, at Nottingham, and in very many colleges and a greater part of the commercial schools. This increase in the study of the language has given also an impetus to the publication of text books, grammars and dictionaries. Recent reviews call attention to a "First Russian Reader compiled from stories by Tolstoy with English notes," published by the Clarendon Press, Oxford, and a more advanced book (Tolstoy's Sevastopol) published by the University Press of Cambridge.

INDIA.—The University of Allahabad, India, has started a library of its own in the new library building just completed and as one means of securing a large and representative collection, the committee in charge has issued a request for material from learned institutions all over the world. In this class are included institutions devoted to the advancement of learning and the diffusion of scientific thought and mechanical arts. The request on the part of the committee specifies at least one copy of all publications of such institutions, including books, journals, periodicals, reports, catalogues, calendars, prospectuses, statistics, charts, maps, &c., &c. In many cases, e. g., calendars and yearbooks, two copies would be very acceptable. Such presentations will be thankfully received, and will bear the names of the donor institutions, and will be arranged in a conspicuous part of the library in order that they may be available to the public and to visitors as well as to the student carrying on the work of research under the guidance of the university. The committee expresses the hope that this appeal will meet with generous response from all countries.

This action by the University of Allahabad is part of the general movement for increasing educational activities in India. The Indian universities, which have hitherto been merely examining bodies, are in process of remodeling as teaching institutions, and in assuming this character they are giving special attention to research teaching departments which require large equipment for literary and scientific investigations.

CHINA. The Report of the Commissioner of Education for 1916, which has just issued from the press, comprises a section on modern education in China which has been compiled from consular reports and special correspondence. The survey extends similar information contained in the Report for 1915 and the two together give a comprehensive view of the development of modern education in that country. The difficulty of covering this vast field may be illustrated by reference to the Province of Hunan. This Province comprises a population estimated at from eighteen to twenty millions, and is the sixth in this respect in the country. Educational facilities adequate for 10 per cent. of this population would require accommodation for two million students and an army of forty thousand teachers. A general summary for 1912-13 gives a total of 198,700 students in modern schools for boys, and 25,606 in corresponding schools for girls. The number of teachers employed was 8,578 in the former schools and 357 in the latter. The total expenditure for these schools amounted to about $800,000. It will be seen that the number of students was about one-tenth of those for whom such provision is needed before modern education becomes universal. In this respect Hunan is one of the leading provinces.

Under these circumstances peculiar interest attaches to the establishment of higher institutions of learning which become centers of modern influence. The section of the Commissioner's report here referred to, includes a list of ten universities and five higher technical schools in China, which by their courses of study and teaching facilities justify their recognition as higher institutions. A. T. S.

Book Notices

The Publishers of Education will be pleased to see that a copy of any book reviewed in this department is mailed to any reader, on receipt of the publisher's price.

BOOKS ON DOMESTIC SCIENCE

THE HOME AND THE FAMILY. An Elementary textbook of Home Making. By Helen Kinne, Professor of Household Arts Education, Teachers College, Columbia University, and Anna M. Cooley, B. S., Assistant Professor of Household Arts Education in the same institution. Price 80 cents.

Also by the same authors,

CLOTHING AND HEALTH. An Elementary textbook of Home Making. Price 65 cents. and

FOOD AND HEALTH. An Elementary textbook of Home Making. Price $1.10.

These three books, published by The Macmillan Company, belong to "The Home Making Series," which stands for the latest and best methods in this increasingly popular department of school education. They are intended for home use by practical housekeepers as well as for classroom service. They are at once scientific and practical and cover the ground of a thorough domestic science course. The language, the enunciation of principles, the choice of problems to be worked out, and the directions for working them are all nicely adapted to the age of elementary school pupils. The history of the materials used is interestingly sketched; the uses which the constituent elements of the foods serve when taken into the human system, are set forth; directions are given for the care of the rooms; the setting of the table; ways of serving; recipes without number; patterns for all sorts of garments; adaptation of clothing to bodily comfort and health; the principles of good taste; judgment and economy in selecting, building and furnishing a house; in fact one can think of nothing that concerns the establishment and administration of a home and family that has been forgotten by the authors of these charming and profusely illustrated volumes.

HOUSEHOLD ACCOUNTING. By William A. Sheaffer, Ph. B., Head of the Commercial Department, West Division High School, Milwaukee, Wisconsin, and Instructor of Accounting, Marquette University, published at 65 cents, by the same publishers,—the Macmillan Company,—gives full and specific directions for accounting for all the expenses of setting up and carrying on the home. The household budget is coming to the front in these days of high prices, and with the aid of this book any householder of average ability can keep track of all expenses. To do so will prove in the end an economy and a real delight. F. H. P.

MY BIRTH. The Autobography of an Unborn Infant. By Armenouhie T. Lamson. The Macmillan Company. Price $1.25 net.

An unusual book, portraying the prenatal development of an infant from the time of conception to the time of birth. The story is written with the utmost frankness and at the same time with admirable delicacy. It will be of deep interest and real value to inexperienced, expectant mothers, and to parents and teachers who believe in answering truthfully, the questions which adolescents are sure to raise. The chapters unfold the wonderful story with a touch of the artist's imagitiveness and with the certitude of the scientist's knowledge. Many well-drawn illustrations present to the eye the different stages of the building of the being that is to be.

Yet we think the book should be used with some caution. Its fulness of detail and particularly the vividness of its illustrations showing the progressive modelings of the embryonic being, might make an over-appeal to the imagination of some temperaments, that would be painful and harmful. An unimaginative temperament, disposed to scientific investigation, would safely receive and profit by the narrative. F. H. P.

THE MINISTRY. An Appeal to College Men. By Charles Franklin Thwing, D. D., LL. D., President of Western Reserve University. Boston, The Pilgrim Press. Price 50 cents net.

Dr. Thwing was educated for the ministry at Andover Theological Seminary and is a well known writer on college subjects. In this compact little volume he describes the attractions of the ministry; the objections likely to arise in the mind of a young man who is debating with himself whether to enter it; the qualities of character necessary for success; and testimonies as to its opportunities and satisfactions. These counsels, from an experienced and magnetic counselor, ought to be very helpful and decisive in the case of many who are about to settle the momentous question of their life work. F. H. P.

TREES AT LEISURE. By Anna Botsford Comstock. The Comstock Publishing Company, Ithaca, N. Y. Price 50 cents.

This is one of the most artistic and beautiful booklets we have ever seen. The author is a lover of nature and her prose proves her to be a true poet. Her trees speak. They are living beings, as individual in their characters as the friends who greet you on your way down town. The American elm "traces its graceful lines against snow and gray sky," "the low, broad thorn-apple shows a fitting framework for the great bridal boquet which will cover it next June"; the sycamore "is over-fond of the reflections of its blotched trunk in the still pools of streams"; and "it is only when the oak stands bared like a runner for the race that we realize wherein its supremacy lies." A writer who can see and impart like this must be heard again. F. H. P.

ROBBIN HOOD AND HIS MERRY MEN. By Maud Radford Warren. Illustrated by Milo Winter. Rand, McNally & Company. A charming supplementary reader for the grades.

THE TEACHING OF HANDWRITING. By Frank N. Freeman, Assistant Professor of Educational Psychology, School of Education, University of Chicago. Houghton Mifflin Company. Price 60 cents net.

This is a thorough study of the psychology and the physiology of handwriting. The subject has been dominated heretofore by tradition. It is one of the last of the regular subjects of the curriculum to receive scientific attention. Let us hope that such books as this will bring not only theoretical but also practical results. We believe that Professor Freeman has done the school world a real service.

THE TEACHING OF HISTORY. By Oskar Jarger. Translated by H. J. Chaytor, M. A. With an introduction by C. H. Firth, M. A., Professor of History in the University of Oxford. A. C. McClurg & Co. Price $1.00.

Dr. Jarger is an authority as historian and an inspirational teacher. His book gives a picture of the classroom methods of teaching history in Prussian schools. We are sure that American teachers will gain many helpful suggestions from its pages.

THE MEASUREMENT OF EFFICIENCY IN READING, WRITING, SPELLING AND ENGLISH. By Daniel Starch, The University of Wisconsin. Published by The College Bookstore, Madison, Wis.

Convenient and suggestive for teachers of the subjects named.

AN OUTLINE OF NATURE STUDY. Showing the plan and practice in the Los Angeles (California) Public Schools. Reprinted from The Popular Science Monthly, by the author, Charles Lincoln Edwards, Ph. D., Director of Nature Study at Los Angeles. The Nature-play described has had a wonderful success in interesting 75,000 elementary pupils and their parents in the above named city and should therefore be of value elsewhere.

THE NEW PSYCHOLOGY. By Herbert L. Wilbur. Published by the author. Arborside, New Boston, Mass. Price 25 cents.

An attempt to give in simple language a birdseye view of the great essentials of thought and the thought process.

PROVISIONAL MINIMUM STANDARDS IN ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION FOR PUPILS IN GRADES IV TO VIII. Bulletin No. II of the Department of Educational Investigation and Measurement, Boston Public Schools.

THE CASE OF BELGIUM. The Macmillan Company. Published for the Belgian Delegates to the United States. It tells a sad story of persecution by the Germans.

THE TEACHING OF CIVICS. By Mabel Hill, Dana Hall School, Wellesley, Mass. Houghton Mifflin Company. Price 60 cents net. A valuable discussion of the problem, together with practical suggestions for the teaching of the subject.

ENGLISH TEXTS

SELECTED LITERARY ESSAYS FROM JAMES RUSSELL LOWELL, with an introduction by Will David Howe (Indiana University) and Norman Foerster (University of North Carolina). Houghton Mifflin Company. Price 60 cents. This book belongs to The Riverside Literature Series.

Belonging to the same series, we have SELECTED ESSAYS. Edited by Claude M. Fuess, Ph. D., Instructor in English, Phillips Academy, Andover, Mass. Price 40 cents.

In the Progressive School Classics Series published by Beckley-Cardy Co., Chicago, at 5 cents a copy, we have Evangeline, Rip Van Winkle, Enoch Arden, The King of the Golden River, The Legend of Sleepy Hollow, The Man Without a Country and The Courtship of Miles Standish.

TALES AND POEMS. By Edgar Allan Poe. Edited with an introduction and notes by Frederick Houk Law, A. M., Ph. D., Head of the Department of English in the Stuyvesant High School, New York City. Illustrated, cloth, 323 pages. Price 40 cents a copy. Charles E. Merrill Company, New York.

MODERN LANGUAGE TEXTS

MENNE IN SEEBAD. Von Hans Arnold. Edited with exercises, notes and vocabulary, by May Thomas, Ph. D., Assistant Professor of German, Ohio State University. D. C. Heath & Co. Price 30 cents.

A HANDBOOK OF EXPOSITION. By R. A. Jelliffe, A. M., Associate Professor of English in Oberlin College. The Macmillan Company. Price 90 cents net. Relates to English composition.

POTTERY FOR ARTISTS, CRAFTSMEN AND TEACHERS. By George J. Cox. Illustrated by the author. The Macmillan Company. Price $1.25 net.

Many schools teach elementary pottery. They will find Professor Cox's manual distinctly useful.

A METHOD FOR TRAINING PRIMARY READING. By Lida Brown McMurry. The Macmillan Company. Price 50 cents.

Teachers of beginners' classes would do well to read this little book for its suggestiveness, whatever may be the system they are using.

HEROES OF PEACE. By F. J. Gould. Illustrated. Harper and Brothers. Price 75 cents.

Very timely. Highly commendable for supplementary reading. Describes conquests of nature, heroism for the good of others, the long struggle to lay the Atlantic cable, the establishment of the Red Cross, etc. Shows the children how to fight and be manly, without quarrels or war.

THE HARVARD-NEWTON BULLETINS: No. I, A School System as an Educational Laboratory. By William S. Learned, Ph. D. No. II, Scales for the Measurement of English Compositions. Cambridge: The Harvard Press. Highly professional monographs of real value to students of education and to teachers.

STATE AND COUNTY EDUCATIONAL REORGANIZATION. The Revised Constitution and School Code of the State of Osceola. By Ellwood P. Cubberley. The Macmillan Company. Price $1.25.

This is a new book in the series known as the Text Book Series in Education. It presents an ideal educational system for the hypothetical state of Osceola. The author is an authority on educational subjects.

MODERN PROBLEMS OF THE HOME, SCHOOL AND CHURCH, SOLVED BY CHRISTIAN PEDAGOGY AND SOCIOLOGY. By G. C. H. Hasscarl, Ph. D. Published by the author at Verona, N. Y.

A thoughtful discussion of educational problems from the Christian standpoint.

THE TEACHING OF MATHEMATICS. By Raymond E. Manchester, A. M., Professor in the State Normal School, Oshkosh, Wisconsin. Syracuse. C. W. Bardeen.

A very able exposition of the place and value of Mathematics in the curriculum, together with helpful suggestions for teaching the subject.

ELEMENTARY HUMAN BIOLOGY. By James Edward Peabody, M. A. and Arthur Ellsworth Hunt, Ph. B. The Macmillan Company. Price 65 cents, net.

Effectively presents the argument for good food, pure air, varied exercise, sufficient sleep and cleanly surroundings.

PEACE AND REFORM, 1815-1837. Complied by A. C. W. Edwards, London. G. Bell and Sons. New York, The Macmillan Company. Price 35 cents.

One of a series of English History "Source Books,"—a valuable adjunct to the history lesson.

HOW THE FLAG BECAME OLD GLORY. By Emma Look Scott with illustrations by A. C. Valentine. The Macmillan Company.

A pretty little patriotic supplementary reader that will be popular in the grades at the time of our national holidays.

COMMERCIAL EDUCATION IN GERMANY. By Frederic Ernest Farrington, Ph.D., Associate Professor of Educational Administration, Teachers College, Columbia University. Author of "The Public Primary School System of France," "French Secondary Schools," etc. The Macmillan Company. Price $1.10.

HEATH'S ENGLISH CLASSICS. Goldsmith's "The Traveller" and "The Deserted Village" and "Gray's Elegy In A Country Churchyard." Edited by Rose M. Barton, M.A., Teacher of English, Wadleigh High School, New-York City. D. C. Heath & Co. Price $.25.

A COURSE IN HOUSEHOLD ARTS. By Sister Loretto Basil Duff, Sc. M., College of St. Elizabeth, N. J. Whitcomb & Barrows. Price $1.10 net.

This volume covers in a thorough way a practical course for beginners in Home Economics, and yet it is as well adapted to high as to grammar school classes. Each topic is fully treated. The processes are not merely suggested,—their reason and method are given. The chapters are rich in practical recipes. The course has been fully tested in the classroom and has not been found wanting. F. H. P.

LIPPINCOTT'S PRACTICAL ARITHMETIC. By T. C. Bruff, C. H. Hayden and L. E. Watkins. First Book and Second Book, each net, $.40.

In this title the adjective 'practical' is not a misnomer. The interesting and varied devices have one aim—the early development of number concepts. The why and the how underlie every bit of the work. Reviews and drill are frequent, to gain accuracy and readiness. It is a most helpful work.

DOG OF FLANDERS. By Ouida. Four full page illustrations in color. Net, $.50.

An exquisite story of child life in Belgium, in which the people are portrayed with skill, one of the finest fruits of Ouida's genius. Children will never forget the faithful dog, Patrasche, nor his little master, Nello. This is a large-type and beautiful edition of the book.